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Wellness Among Freshmen at The University of Tennessee

Laura Bilderback
University of Tennessee, Knoxville

To the Graduate Council:

I am submitting herewith a thesis written by Laura Bilderback entitled "Wellness Among Freshmen at The University of Tennessee." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in College Student Personnel.

Ernest W. Brewer, Major Professor

We have read this thesis and recommend its acceptance:

Gregory C. Petty, Alan P. Chesney

Accepted for the Council:
Dixie L. Thompson

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

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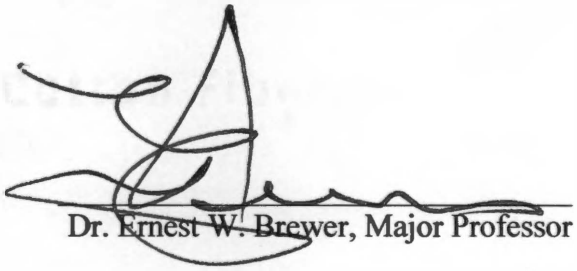

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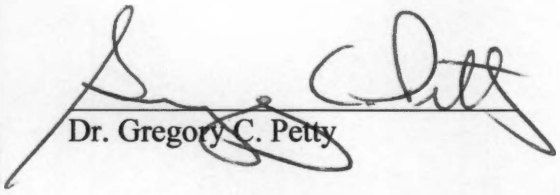

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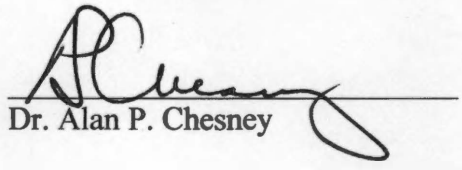

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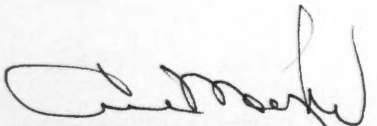

Vice Chancellor and Dean
of Graduate Studies

WELLNESS AMONG FRESHMEN AT THE UNIVERSITY OF TENNESSEE

A Thesis
Presented for the
Master of
Science Degree
The University of Tennessee, Knoxville

Laura Bilderback
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"Be the change you want to see in the world." Gandhi

I appreciate all who have contributed to the completion of this thesis. First, I would like to thank my major professor, Dr. Ernest W. Brewer, a professor of the Department of Educational Administration and Policy Studies, for all the time, energy, and support he has provided to make this project a complete piece of literature. He provided encouragement when all the work began to grow. Thank you to my committee members Dr. Gregory C. Petty and Dr. Alan P. Chesney, the Executive Director of Human Resources at The University of Tennessee, who contributed many hours of reading and correcting. Without the guidance of these three gracious people, I could not have completed my thesis.

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ABSTRACT

Because health and wellness are declining in college-aged students, it is important for college student personnel administrators to become knowledgeable of wellness programming. Currently available information on students' wellness at The University of Tennessee (UTK) is incomplete. This study examined the knowledge of wellness of first year students at UTK.

A descriptive survey was conducted in First Year Studies (FYS 100) classes to first year students at UTK during the Fall 2003 semester. The key purpose of this descriptive study was to examine UTK first year students' knowledge of wellness and the extent to which their lifestyle behaviors reflect potential risks and hazards. Also, it was important to determine participants' demographic characteristics. The questionnaire collected information on (a) gender, (b) age, (c) marital status, (d) ethnicity, (e) GPA, (f) ACT scores, (g) the college in which the participant was enrolled at UTK, (h) how often the participant used the UT Recreation Center, and (i) how many alcoholic drinks the participant consumed per week.

Established by the National Wellness Institute, the TestWell Inventory – college version was designed based on the six dimensions of wellness: (a) physical, (b) emotional, (c) social, (d) intellectual, (e) occupational, and (f) spiritual. The test addressed the following wellness issues: (a) physical fitness and nutrition, (b) medical self-care, (c) safety, (d) environmental wellness, (e) social awareness, (f) sexuality and emotional awareness, (g) emotional management, (h) intellectual wellness, (i) occupational wellness, and (j) spirituality and values.

A total of 382 first year students were purposively selected from the 540 students who were enrolled in the First Year Studies (FYS) 100 course, which was a portion of the total freshmen population of 5,194. The researcher attended 21 of 30 FYS classes. The instrument used in this study was the TestWell Wellness Inventory, the college version. This test, which was developed by the National Wellness Institute Inc., was "designed to address lifestyle choices facing today's college students" (*Mental Measurements Yearbooks*, 2002).

A *t*-test was conducted to determine whether the respondents' and non-respondents' responses were significantly different. A multiple analysis of variance (MANOVA) was used to determine whether there was a significant difference between subscales in the TestWell scores. Last, a simple analysis of variance (ANOVA) was used to determine whether there was a significant difference between means.

Major findings of the study displayed that (a) gender had an effect on TestWell Inventory mean scores; (b) grade point average (GPA) had an effect on TestWell Inventory mean scores. The higher the participants' GPA, the higher their TestWell scores were; (c) similar to GPA, participants' reported ACT scores had an effect on TestWell Inventory mean scores. On average, the higher the participants' ACT scores, the higher their TestWell scores were; (d) usage of UTK's recreation center had an effect on individuals' TestWell Inventory scores. Participants who visited the recreation center more than 3 times per week had the highest mean scores in the (a) Physical Fitness and Nutrition, (b) Medical Self-Care, (c) Social Awareness, (d)Sexuality and Emotional Awareness, (e) Emotional Wellness, and (f) Occupational Wellness subscales, and (e) consumption of alcohol had an effect on reported TestWell Inventory scores. Participants

who drink five or more drinks per week had the lowest mean scores in the following subscales: (a) Physical Fitness and Nutrition, (b) Medical Self-Care, (c) Environmental Wellness, (d) Social Awareness, (e) Sexuality and Emotional Awareness, and (f) Spiritual and Values. Further, significant differences were discovered in null hypotheses regarding gender, GPA, ACT scores, usage of the university's recreation center, and consumption of alcohol per week. There was no significant relationship between participants' ages, ethnicities, and the colleges in which participants were enrolled and their TestWell scores measured by the TestWell Inventory.

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CHAPTER I

INTRODUCTION

Health and wellness are essential concerns in today's university settings; at some time in their lives, all students face disease and health. Personal habits can contribute to the well-being of an individual and either promote or compromise health. Although wellness is the responsibility of the individual, university wellness programs have integrated and extended services to support individual efforts and choices promoting health, well-being, and a balanced lifestyle. Chapter I acts as a foundation for the following chapters and this study. It presents the rationale for the study, the statement of the problem, and the purpose of the study. Also, null hypotheses, assumptions, delimitations, limitations, and operational definitions are stated.

Statement of the Problem

Based on findings from Health Trends Among College Freshmen (Sax, 1997), the Higher Education Research Institute 1995 National College Health Risk Behavior Survey (Douglas, Collins, Warren, Kann, Gold, Clayton, et al., 1997), and the 2001 Pilot Administration of Your First College Year: National Norms (Sax, 2002), it is apparent that students' health and wellness are declining. Some of the negative trends include the following: substance abuse, mental health, and sexual health. Many studies have been conducted to support the decline in students' wellness. Students' current lifestyle behaviors and how those behaviors reflect potential risks and hazards are not apparent in current research.

Purpose of the Study

The purpose of this descriptive study was to examine first year college students' knowledge of wellness and the extent to which their behaviors reflect potential risks and hazards. The TestWell Wellness Inventory, the college version, evolved from Hettler's (1980) six dimensions of wellness and was "designed to address lifestyle choices facing today's college students" (*Mental Measurements Yearbook*, 2002). The TestWell Inventory consists of the following dimensions of wellness: physical, emotional, social, intellectual, occupational, and spiritual. A sample of 360 first year students at The University of Tennessee was surveyed from 540 students who were enrolled in the First Year Studies 100 courses, which was a portion of the total population of 5,194 freshmen class.

Hypotheses

This study investigated students' knowledge of wellness and the extent to which students' lifestyle behaviors reflect risks and hazards. The following null hypotheses were addressed to accomplish this purpose:

1. There were significant differences between male participants' and female participants' Testwell scores as measured by the TestWell Inventory.
2. There were no significant differences between participants' age and their TestWell scores as measured by the TestWell Inventory.
3. There were no significant differences between participants' marital status and their TestWell scores as measured by the TestWell Inventory.
4. There were no significant differences between participants' ethnicity and their TestWell scores as measured by the TestWell Inventory.
5. There were significant differences between participants' grade point average (GPA) and their TestWell scores as measured by the TestWell Inventory.

6. There were significant differences between participants' ACT score and their TestWell scores as measured by the TestWell Inventory.

7. There were no significant differences between participants' college and their TestWell scores as measured by the TestWell Inventory.

8. There were significant differences between how many times per week the participants utilize the UT Recreation Center and their TestWell scores as measured by the TestWell Inventory.

9. There were significant differences between how many alcoholic drinks per week participants consume and their TestWell scores as measured by the TestWell Inventory.

Assumptions

Assumptions are items believed to be true but have not been thoroughly confirmed (Gay & Airasian, 2003). It is necessary to look at the assumptions to evaluate the validity of this study's results accordingly. There are assumptions involving participants' understanding of and responses to items on the TestWell Inventory.

1. It was assumed that participants will respond to TestWell Inventory items according to their understanding of the wellness philosophies of Hettler (1984) and the National Wellness Institute (1980).

2. It was assumed that participants will respond to each of the questions accurately and honestly.

3. It was assumed that a participant's personal responsibility and individual choices were significant to the idea of wellness.

4. The TestWell Wellness Inventory, college version, was a reliable and valid instrument to evaluate wellness behaviors of first year students at The University of Tennessee.

5. It was assumed that the sample drawn will be representative of the population.

Delimitations

Delimitations are researchers' restrictions to their studies. The following delimitations were applied to this study:

1. Participants were first year students at The University of Tennessee for the Fall 2003 semester.

2. The participants were selected based on a purposive sample.

3. Student wellness were delimited to the dimensions presented in the TestWell Inventory.

Limitations

Limitations are restrictions that the researcher knows may affect the study, but he or she has no control over them (Gay & Airasian, 2003). The following limitations could affect the generalizability of the results and should be kept in mind when interpreting the conclusions of this study.

1. Typical of all measurement results, those that will be presented here may contain some measurement error. Professionalism should be used in evaluating and applying the results that will be presented in this study.

2. Institutional characteristics will confine the results to comparable 4-year universities in similar geographic areas. And, if similar institutional characteristics exist, their educational impacts may not be entirely homogeneous.

3. There will be no control over students' perceptions of wellness.

Operational Definitions

The following operational definitions have been offered to clarify the connotation of the variables. The National Wellness Institution (1992) defined the following terms, which were used in this study.

1. **Wellness**: Ongoing, active process; a process of becoming aware of the different areas in life, identifying the areas that need improvement, and making choices that will help attain a higher level of health and well-being.

2. **Dimensions of Wellness**: Social, intellectual, spiritual, physical, emotional, and occupational.

3. **Social Wellness**: Ability to function interdependently with others and the environment and contribute to common welfare of the community.

4. **Intellectual Wellness**: Ability to expand knowledge and improve skills through creative and stimulating mental activities.

5. **Spiritual Wellness**: Ability to maintain ongoing involvement in seeking purpose and meaning in life.

6. **Physical Wellness**: Commitment to physical exercise and maintenance of fitness; ability to practice disease prevention, detection behaviors, vehicular safety, and suitable substance use behaviors and to adhere to suitable food choices within the United States dietary guidelines.

7. **Emotional Wellness**: Management of feelings and behaviors and positive awareness and acceptance of self and life.

8. **Occupational Wellness:** Ability to expand knowledge, improve skills, and derive a high degree of satisfaction and enrichment from work.

Summary of Chapter I

Chapter I established the foundational background and basic conceptualization of the study. The rationale, the purpose of the study, a statement of the problem, null hypotheses, operational definitions, assumptions, delimitations, and limitations of the study were presented in this chapter. Chapter II consists of a review of literature related to wellness. The methodological plan for accomplishing this study is located in Chapter III.

CHAPTER II

REVIEW OF LITERATURE

Introduction

As noted in Chapter I, the purpose of the study was to examine the knowledge of wellness and the extent to which first year University of Tennessee, Knoxville students' lifestyle behaviors reflect potential risks and hazards. Chapter II provides a review of literature related to wellness in terms of definitions, theoretical perspectives, and research approaches.

Defining Wellness

Although, many people think of health in terms of disease, it is either the existence or absence of illness. Throughout the years, researchers have advanced this view of health to one of an optimum well-being. Health has evolved into wellness and holistic health. These terms now encompass every aspect of life, including emotions, thoughts, attitudes, feelings, physical surroundings, and success of relationships (Edlin & Golanty, 1992).

The terms *health* and *wellness* have been used interchangeably. However, the terms are extremely different. The word *health* derived from an Anglo-Saxon root meaning "wholeness," which entails something intact or balanced-free from disease and illness (Hurley & Schlaadt, 1992, p. 9). The World Health Organization defined health as "a state of complete physical, mental, and social well-being, and not merely the absence of disease" (1947). From the Aerobics and Fitness Association of America (2003), optimal wellness depended on a balance of getting enough physical activity, eating properly, managing stress, and following preventive guidelines.

Wellness is the process of moving towards optimum heath and includes physical, mental, emotional, and spiritual aspects of life. Health is an on-going process in which the mind, soul, and body interrelate. It is a process in which a person continually makes choices, takes actions, and grows (Hurley & Schlaadt, 1992, p. 11). According to Edlin and Golanty (1992), positive wellness includes being free from symptoms of disease and pain, being able to be active, and being in good spirits most of the time.

The American Holistic Health Association (AHHA; 1999) defined holistic health as an approach to life and specified that health is more than not being sick. It considered the whole person and how the individual interacts with his or her environment. The goal of holistic health is to reach maximum well-being (AHHA). Holistic health is based on the law of nature that a whole is made up of interdependent elements. It is an on-going process and an individual can always improve his/her level of well-being. Last, the AHHA states "people are motivated by how good it feels to have lots of energy and enthusiasm for life" (p. 3).

From the previous definitions of health and wellness, it is demonstrated that *wellness* has derived from *health*. People used to see *health* as the absence of disease, now *wellness* is looking at the whole person, which involves eating healthy, exercising regularly, and managing stress. Wellness is an intervention of the mind, body, and soul. It is an on-going, active process, not a single goal. Having a high level of wellness can provide a greater satisfaction of life. Descriptions of perspectives of wellness by Halbert L. Dunn, Donald B. Ardell, and William H. Hettler follow.

Theoretical Perspectives of Wellness

Halbert L. Dunn greatly contributed to the areas of well-being and wellness. In *High Level Wellness* (1961), he stated that complete well-being encompasses wellness of the body, mind, and environment. High level wellness is defined as "an integrated method of functioning which is oriented toward maximizing the potential of which the individual is capable. It requires that the individual maintain a continuum of balance and purposeful direction within the environment where he is functioning" (Dunn, pp. 4-5). The continuum accomplished forward and upward direction, toward an increased capability of functioning. Dunn stated, "An open-ended and ever expanding tomorrow" involves an obstacle "to live at a fuller potential" (p. 159).

Donald B. Ardell (1979) introduced *High Level Wellness: An Alternative to Doctors, Drugs, and Disease* as a wellness lifestyle is more fun. Wellness is a positive approach to health. A wellness lifestyle is simply more enjoyable, than avoiding illness or trying to live longer. According to Ardell, wellness has five dimensions. They are self-responsibility, nutritional awareness, physical fitness, stress management, and environmental sensitivity. Ardell concluded that paying attention to lifestyles and the surrounding environment offers the most rewarding paths to increased levels of health. However, wellness initiatives in one area of an individual's life will strengthen health-enhancing behaviors in other areas. Next, it is possible to be well even though a person may be ill or dying. Finally, Ardell believed high level wellness can be achieved by everyone. Having a high level of wellness offered a life of great satisfaction, increased composure, and an expanded interest in the future.

William H. Hettler's (1980) wellness framework incorporates six dimensions of wellness: intellectual, emotional, physical, social, occupational, and spiritual. This is the model used by the National Wellness Institute. Being a leading advocate of wellness programs, Hettler highlighted change and effective daily decision making in his holistic approach. Self-concept and an individual's surrounding culture and environment can have an impact on successful decisions. According to Hettler, wellness is "an active process through which the individual becomes aware of and makes choices toward a more successful existence... a positive approach to living – an approach that emphasizes the whole person" (p. 77).

As noted earlier, authors have interpreted wellness in a variety of ways. Dunn's (1961) view of wellness emphasized the integration, balance, and equilibrium of the total individual. Ardell (1979), on the other hand, emphasized stress management, medical self-care, and self-responsibility. Last, from a holistic perspective, Hettler (1980) focused on individual potential. The basic wellness perspectives presented by all three authors incorporated the "total person." The themes included self-responsibility and awareness and placed emphasis on the process of wellness and the integration of mind, body, and spirit.

History of Wellness

The traditional approach to health has been disease-oriented rather than health-oriented. In the past, health was the absence of disease, but a broader scope of environmental factors that influence health has emerged. Individuals are a key element in modifying their behaviors and improving their health.

Holistic health dates back as far as 5,000 years ago in India and China (AHHA, 1999). Viewing living things as "entities greater than and different from the sum of their parts" (p. 1) was the definition of holism, introduced by Jan Christiaan Smuts in 1926. Holism became more common in the 1970s and has grown increasingly popular each year. Holistic principles offer options to meet the increasing desire to enjoy a high level of well-being.

Dunn (1961) emphasized the individual finding personal satisfaction and a sense of purpose in life. He stressed that health was more than the absence of illness, and this was the development of high level wellness.

In a much later study, Sax (1997) found stress to be a major issue for college students as they struggle with academic, personal, and social pressures. A large number of students felt overwhelmed at the college level. In student affairs, interest in wellness among college students has sky-rocketed in the past years. Wellness programs can bring a cost-effective aspect to the college setting.

As presented, it is apparent that health and wellness have grown in their definitions as well as their dimensions. However, as shown by the theoretical perspectives and history of wellness, there is a wide divide between theory and research. Wellness is the process of moving towards optimum heath and includes physical, mental, emotional, and spiritual aspects of life (AHHA, 1999). Health is an on-going process in which the mind, soul, and body interrelate.

Models of Wellness

Although there is need for research on the subject of wellness, there are models that incorporate wellness and dimensions of wellness. Many researchers have used the following models as a basis for their studies.

Health Belief Model

The health belief model is considered to be the beginning of systematic, theory-based research. The health belief model, which has been used to describe health-related behavior and prevention, originated from Lewin's (Gonzalez, 1989, p. 492) theory of goal setting. Applied to all types of health behavior, the health belief model can be divided into individual perceptions, modifying behaviors, and likelihood of action. According to Maiman and Becker (1974), the health belief model relates theories of decision making to an individual's decision about alternative health behaviors. To avoid problems, people need to believe that they are personally susceptible to the problem. The perceived severity of the condition, perception of benefits, and barriers to alternative behavior will influence the person's character to take action, and a "cue to action" must occur to cause the behavior. Therefore, motivation is the key for determining one's perception of their environment (Gonzalez).

Because the health belief model ignores environmental conditions, social learning theory has been used to incorporate socioenvironmental factors and personal perceptions. Through the social learning theory, human behavior is determined by the influence of situation, the person's behavior, and the person's cognitions. The environment causes behavior, and in return, behavior causes the environment (Bandura, 1977). Albert Bandura, a key contributor to the social learning theory, believed motivation is the key

aspect of observational learning and also focuses on the effect of individual's perceived abilities on his/her behavior. Social learning theory has combined efforts to correct perceptions of social norms with individualized instruction on peer refusal and social skills and has emphasized the development of social and personal skills to avoid pro-drug environments and peer pressure among young adults. According to this theory, unhealthy behaviors are maintained through occasional social reinforcement, environmental cues, and some physiological reinforcement. Expectations about the outcomes that result from engaging in a behavior and expectations about the ability to engage in the behavior are the reasons for behavior change and maintenance according to the social learning theory (Gonzalez, 1989).

Wheel of Wellness

A second model of wellness is the wheel of wellness, which is a holistic, multidisciplinary model of a person's life span and wellness (Myers, Sweeney, & Witmer, 2000). Based on psychological theories of growth and behavior, the wheel represented wellness and the relation to its components. Any detrimental change acted as a catalyst on all components. Change in one area resulted in changes in other areas. Represented in this wheel of wellness are five major life tasks: spirituality; self-direction; work, recreation, and leisure; friendship; and love. All life tasks are interconnected and interacted for the well-being of a healthy person (Smith, Myers, & Hensley, 2002). This model originated in theoretical construct and research in psychology, anthropology, sociology, religion, education, and behavioral medicine.

Wellness Model

Last, the wellness model focuses on the principles of multidimensionality, balance of dimensions, and causes health rather than illness (Adams, Bezner, Drabbs, Zambarano, & Steinhardt, 2000). As seen in Figure 1, the top of the cone-shaped model represents wellness, and the bottom of the model represents illness. In their article, Adams, Bezner, Drabbs, Zambarano, and Steinhardt (2000) found the following:

> The top of the model represents wellness because it is expanded to the fullest possible extent, whereas the tightly constricted bottom represents illness. In between are combinations of wellness in several dimensions and the various states of balance among them. The lines that extend from the inner to the outer circle indicate the possibility of bidirectional movement along each continuum. Movement in every dimension influences and is influenced by movement in all other dimensions. For example, in extreme wellness conditions, one or more dimensions expand and place an "outward wellness force" on each of the other dimensions. By contrast, in extreme illness conditions, one or more dimensions contract and cause either compensatory or concomitant change in each of the other dimensions (p. 166).

Between the top and bottom poles are countless fluctuations in each dimension. The 6 dimensions of the wellness model are (a) social, (b) psychological, (c) intellectual, (d) emotional, (e) spiritual, and (f) physical. Like the wheel of wellness, a change in one dimension affected the other dimensions. The three models incorporate many facets of wellness and are presented in many research studies. These models act as bases for the relevant studies.

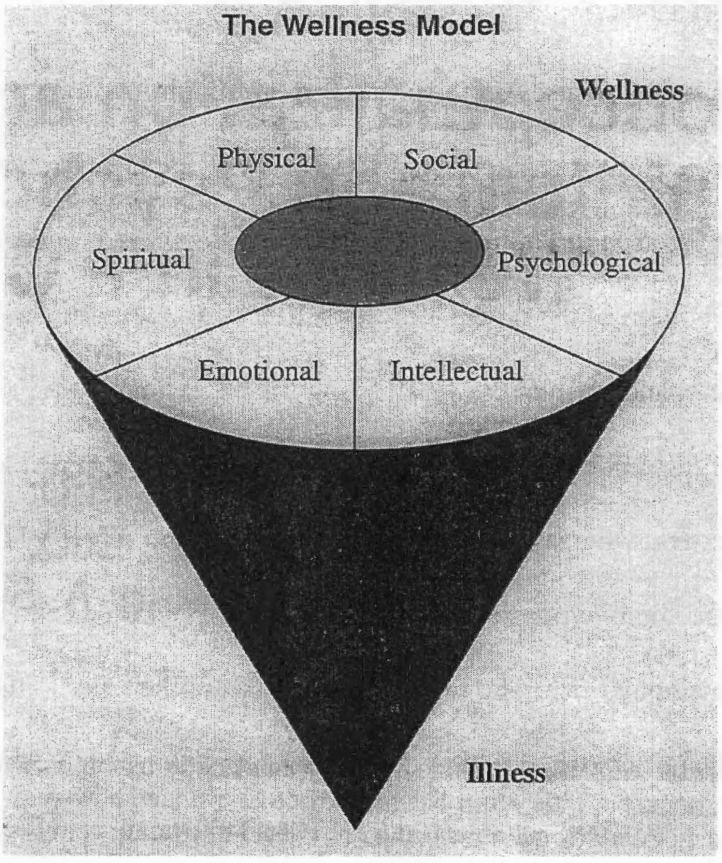

Figure 1. The Wellness Model

Relevant Studies of Wellness

Because of the increasing number of negative health trends among college students, health among college students has become important. This then becomes a growing concern for researchers and college health administrators. Some of these trends include substance abuse, such as alcohol and drugs; mental health, such as stress, anxiety, self-esteem, and social support; and sexual health, including sexually transmitted diseases (STDs) and sexual assault. These college student health issues can lead to problems with academic achievement and development, relationships, and physical health. Staying healthy is important for college success and a student's overall satisfaction with college (Sax, 1997).

The first study that was reviewed, conducted by Hybertson, Hulme, Smith, and Holton (1992), explored the question, "Are the factors that affect non-traditional-age commuter students' wellness different from the factors that affect traditional-age students?" The researchers randomly selected classes at a commuter institution to do a survey questionnaire based on Hettler's (1980) six dimensions of wellness, factors characterizing their lifestyle, and data relevant to the development of the wellness program located at that university. The results were that non-traditional-age students believed that the social dimension affected their wellness more than any other dimension. The factor selected by most non-traditional-age students that was detrimental to wellness was "feeling overwhelmed or conflicted about fulfilling my role responsibilities" and for the younger student it was "worrying" (Hettler, pp. 52-53). Also, non-traditional-age students were more likely than traditional-age students to identify environmental influences as important health and well-being factors. Therefore, wellness programs

should include information on time and stress management, substance abuse prevention, physical fitness, and leisure opportunities in campus environment.

Developed by the Centers for Disease Control and Prevention (CDC), the 1995 National College Health Risk Behavior Survey is a questionnaire, addressing a broad range of health risk behaviors. The survey was completed by 4,838 student participants at 136 institutions. The outcomes of the survey indicated that many college students are put at risk because of their behaviors. The survey resulted in the following: 31.3% of students smoked cigarettes daily; 29% were current smokers; 16.5% were currently frequent cigarette smokers; 34.5% of students reported current episodic heavy drinking; 30.6% of freshmen reported spending 6 or more hours per week partying; 87.8% of students had sexual intercourse; 31.8% had six or more sex partners during their lifetime; 25.1% reported consistent condom use; 20.5% of all students were overweight; and only 37.6% reported participating in physical activity for at least 20 minutes on 3 out of 7 days (Douglas et al., 1997).

In the next important study, the Cooperative Institutional Research Program surveyed incoming freshmen from colleges and universities across the United States (Sax, 1997). Some alarming statistics were the percentages of students rating themselves on physical health compared to an average person who was close to their age. Students who rated themselves above average or in the highest 10% had dropped to 52.4%, from 61.6% in 1985. Students' confidence in their emotional health declined. Students who rated themselves above average or in the highest 10% on emotional health dropped to 53.2%; in 1985 that percentage was 60.3%. Also, women reported less confidence about their physical and emotional health than did men. Gender differences were also apparent

relative to depression and being overwhelmed. Furthermore, students who were overwhelmed by what they had to do and those who were frequently depressed increased from 1985 to 1995.

Last, the Higher Education Research Institute at UCLA has conducted a nation-wide survey since 1973. This survey gauges the views of freshmen on sex and drugs, activism, interracial relationships, academics, and religion. According to the Higher Education Research Institute's American Freshman National Norms for Fall 2001, self-ratings in physical and emotional health hit a record low. More than 55% of freshmen rated their physical health above average or in the highest 10% compared to other freshmen their age. In the 2000 study, it was 56.4%. Emotional health also hit a record low of 53.4% in 2001, down from 53.8% in 2000. In 1985, when this question was first included in this survey, 63.6% of freshmen considered their emotional health as above average or in the highest 10%. Gender differences were also apparent in this study. Female freshmen scored at a lower level than male freshmen on their sense of health and wellness. Also, fewer women than men scored themselves highly on emotional health.

Related Literature to Wellness

In 1997, Elliot, Johnson, and Jackson studied the relationship between social problem solving and health behaviors among undergraduates. The researchers randomly selected freshmen who were enrolled in an introductory psychology course, and they tested the participants by using the Social Problem Solving Inventory-Revised assessment. Accident prevention was associated with a greater sense of competency and motivation for problem-solving. Researchers concluded the following. First, an avoidant style may be associated with less goal-oriented behavior and with procrastination,

passivity, and a tendency for shifting decision-making to others. Next, found in this study among men was the relation of certain problem-solving dimensions to substance risk taking, and among women, the relation of certain problem-solving dimensions to wellness behaviors and risk taking. Individuals who had a negative problem orientation were more likely to experience negative moods under routine and stressful conditions than individuals with a positive problem orientation. Third, fewer accident prevention behaviors were associated with negative problem orientation among women. Also, undergraduate women had more health complaints than men in times of stress.

In 1998, Sands, Archer, and Puleo examined the relationship between seven variables (perceived barriers, perceived susceptibility, perceived severity, perceived benefits, self-efficacy, social influence, and identity/confidence strength) that can be used to predict prevention behavior in college students and specific health risk prevention behavior areas (i.e., AIDS prevention, alcohol abuse prevention, and nutrition). Among the 356 undergraduates who were surveyed, self-efficacy was the strongest predictor of alcohol abuse prevention; identity/confidence was the strongest predictor of AIDS prevention; and social influence had the greatest effect on nutrition. Perceived barriers and severity were the two health belief model dimensions that predicted alcohol use behavior.

Hermon and Hazler (1999) used the Wellness Evaluation of Lifestyle (WEL) and Memorial University of Newfoundland Scale of Happiness (MUNSH) to investigate the relationship between college students' perceived psychological well-being and the quality of their lives. Their sample included 155 undergraduates from a large midwestern university in the United States. The results indicated a significant relationship between

reported adherence to a holistic model and state and trait aspects of psychological well-being. Also, the self-regulation, work, recreation, and leisure dimensions of the wellness model were the best predictors of college students' psychological well-being.

In 2000, Adams and colleagues evaluated the relationship between spiritual and psychological dimensions and the overall model of perceived wellness. They used a convenience sample of undergraduate students at The University of Texas, Austin and the following instruments: the Life Purpose subscale from the Life Attitude Profile, the Life Orientation Test to measure optimism, the Sense of Coherence Scale, and the Perceived Wellness Survey. The tests concluded that higher scores on perceived wellness were significantly related to higher scores on life purpose, optimism, and sense of coherence, and optimism and sense of coherence had a direct effect on overall wellness.

In 2001, Edwards, Hershberger, Russell, and Markert examined the contributions of positive social support and negative social exchange in the relationship between stress and health symptoms. Prior to Edwards et al. research, the following conclusions have been made by Thoits (1995): a positive relationship exists between social integration and mental and physical health; perceived emotional support is related to better mental and physical health; and having an intimate and confiding relationship is the best measure of social support and decreases stress. Research by Reifman & Dunkel-Schetter (1990) found a direct relationship between social support and well-being in college students, and frequent interactions with other students were associated with well-being. This emphasized the importance of taking into account quality social interactions. Last, Sandler and Barrera (1984) discovered when individuals were satisfied with a satisfying level of support, they displayed no negative effects of stress.

Edwards et al. (2001) contributed to the research on the relationship of social support and health. Participants were selected by convenience sampling, and the instruments used were the Life Experiences Survey, the Hassles Scale, the Social Support Inventory, the Test of Negative Social Exchange, the Mental Health Index, and the Pennebaker Inventory of Limbic Languidness. Results from the study revealed an inverse relationship between positive social support and negative social exchange. Also, correlations among positive social support, negative social exchange, life event stress, and daily hassles were significant. Increased stress negatively impacted physical and psychological health, and negative social interactions diminished physical health. Before Edwards' et al. research, social support was studied, but not much attention was devoted to the impact of social interactions.

In 2002, Deckro and colleagues (all from Harvard) evaluated the effectiveness of a simple mind/body intervention in reducing some of the negative psychological impacts of stress in college students. Their goal was to expand on previous research by presenting a broader picture of psychological distress and perceived stress. At the beginning of the study, 69% of the sample reported having excessive stress, and 62% reported being more anxious than most people. Insomnia, which is associated with stress, was a problem for students; many did not feel rested upon awakening; students reported using some form of relaxation, and students reported religious or spiritual practice was important to them. After the students participated in discussion, lecture, relaxation skills, and cognitive behavioral interventions, the elevated anxiety scores fell below the mean for college students.

Adopting healthy food habits, as outlined by the U.S. Dietary Guidelines is essential for maintaining a healthy lifestyle. College students often have unhealthy diets that do not contain enough fruits and vegetables. Assessing the eating habits of students and promoting desirable dietary changes could improve their quality of life. Wellness programs should contain exercise and nutrition components to help students create a healthy lifestyle and high level of self-esteem (Bates, Cooper, & Wachs, 2001).

McArthur, Rosenberg, Grady, and Howard (2002) assessed college students' compliance with the Food Guide Pyramid recommendations regarding the number of servings of the five food groups. A sample was recruited from dining halls, the student union, and outside the library of a northeastern university. The survey consisted of questions about demographic and lifestyle characteristics and the number of servings consumed on the previous day from the five food groups. The majority of students was in the normal weight category, ate out one to three times per week, and sometimes consumed high-fat foods and snacks. The students who read food labels did so to obtain information about the calorie content and total fat. However, overall compliance with the Food Guide Pyramid was poor among college students.

Johnston, Solomon, and Corte (1998) studied the number of servings of fruits or vegetables consumed by participants in the preceding 24-hour period. The researchers conducted two studies – one in the fall and one in the winter – to examine any seasonal effect on the consumption of fruits and vegetables. Among college students, marginal vitamin C status was common and was related to low fruit and vegetable consumption.

In 1992, Kessler, Jonas, and Gilham reported on nutritional services offered through randomly selected student health centers at American College Health Association

institutions. It was reported that larger institutions were more likely to provide services than smaller institutions; the most common nutrition programming was individual counseling. Furthermore, the educational background of individuals who provided nutrition services to student varied, and nutritional services costs to students were nominal and some were free of charge.

O'Dea and Abraham (2002) investigated the eating, weight, shape, and exercise behaviors of a convenience sample of 93 male college students. The participants completed the Eating and Exercise Examination. They reported that 18% of male college students ate only two meals each day. Also, one fifth of the students worried about their weight and shape and had restrictive eating behaviors.

A questionnaire was administered by Graham and Jones (2002) to research students' eating attitudes and behaviors, body image, demographic data, exercise habits, and awareness of concern of the "Freshman 15." "Freshman 15" is a belief that college freshmen gain 15 pounds during their first year on campus. Participants included freshmen at a small Midwestern college. The average amount of weight that students reported gaining was only 4.6 pounds, and 36% lost weight during their first year of college. The freshmen who were concerned about the "Freshman 15" were more likely to think about their weight, have a poorer image of their bodies, and categorize themselves as overweight.

Fitness is another important key in wellness noted by Bates and colleagues (2001). High levels of physical activity are related to lower levels of physical discomfort among college students. On the contrary, research has reported a decline in fitness levels. Pierce, Butterworth, Lynn, O'Shea, and Hammer (1992) conducted a fitness assessment

of members of a comprehensive wellness course that is a requirement at The University of Richmond. The assessment consisted of aerobic activity, body composition, muscle strength and endurance, and joint flexibility. Their data were consistent with previous research that indicated that fitness levels of incoming college students were not encouraging.

College student health is a growing concern for researchers and college administration. From the literature and the related literature, it is apparent that many factor affect students' wellness and the need for a controlled wellness program in college settings.

Wellness in University Settings

Enhancing the quality and years of life for Americans is one of the goals of *Healthy People 2010* (U.S. Office of Disease Prevention and Health Promotion, 2000). A concern for higher education administrators and staff has been to increase the quality of student life by placing emphasis on health and wellness at the college level. College student personnel professionals can play a major role in facilitating and encouraging students to take full responsibility for their own wellness. However, administrators and staff must first understand the holistic approach to wellness before they can incorporate it into activities and programming (Fain & Lewis, 2002). The mission of most colleges and universities is to define and investigate knowledge, to teach the applications of knowledge, and to provide a source and service to the surrounding community (Jamner & Stokols, 2000) as well as to develop the student as a whole. Wellness programs in higher education have been created "to improve the quality of life, psychological well-being and holistic development of students on campus" (Hermon & Hazler, 1999, p. 339).

According to the Higher Education Research Institute (2002), college students' physical and emotional health have hit a record low. Therefore, college student health and wellness is a matter of concern for all individuals who are involved with college students. Wellness programs involve multiple elements of the university environment (Warner, 1984). To protect and emphasize the students' health is the role of college health programs. Optimal wellness depends on getting enough physical activity, eating properly, managing stress, and following preventive maintenance guidelines. Healthy students achieve greater academic success, are more productive, and have a more enjoyable college experience than unhealthy college students. Although wellness primarily occurs through individualized choice and effort, college health and wellness programs can boost the learning environment, while supporting the cognitive, emotional, behavioral, and social development of each student.

Another area of the college environment where wellness dimensions are used is the counseling center. Almost 7% of college freshmen indicated that there is likelihood that they will seek counseling while attending college (Higher Education Research Institute, 2002). Also, in the study of social problem solving and health behaviors by Elliot et al. (1997), it was concluded that students, in times of stress, have more health complaints. These studies imply a need for university wellness programs. Wellness concepts have been used in counseling centers to promote more adaptive lifestyles with proactive interventions (Elsenrath, 1984). At counseling centers, effective skills in regulating and monitoring emotional experiences can be taught to students.

Counselors at counseling centers can complement wellness programs with instruction in defining problems, evaluating solutions, selecting the best solution, and

then implementing the solution (Elliot et al., 1997). Also, they found wellness programs should include information on time and stress management, substance abuse prevention, physical fitness, leisure opportunities, and promotion in campus environment (Hybertson et al., 1992).

Most wellness programs are components of university recreation centers, where students can concentrate on physical health and nutrition. Physical fitness is an aspect of wellness that most universities have included in their wellness programs, especially since fitness levels have shown a decline. According to Nahas (1992), even moderate to light physical activity can lead to improved health. Lack of knowledge is associated with poor attitudes and small levels of activity for health and fitness (Nahas). A good attitude toward physical health can be influenced by a better knowledge of health-related fitness concepts (Nahas).

According to Trimble and Hensley (1990), more than 90% of 4-year higher education institutions provide physical education either as an elective or a requirement. Many of those departments offer courses about the basic concepts of healthful living, physical fitness, weight and body composition, and nutrition. The purposes of these courses are to teach a variety of issues relative to physical education and healthy living, to provide students with experience in physical fitness, to teach students how to design exercise programs based on their body type, and to empower students with the ability to make educated decisions about physical fitness throughout their lives (Vehrs & George, 1995). DeVoe and Kennedy (2000) also reported on wellness course requirements. They recommended that courses should develop students' knowledge of health and wellness issues, teach the interconnectedness of human health and wellness to physical and social

environments, and contain an understanding of scientific principles that relate to health and wellness issues and of the role of preferences and values in health and wellness choices.

Educational programs promoting nutrition can help students plan meals within the Food Guide Pyramid and teach them how to prepare these foods. The results from the nutritional studies conducted by McArthur et al. (2002), O'Dea and Abraham (2002), and Johnston et al. (1998) displayed a rationalization for colleges to develop and implement nutritional programs and preventative interventions emphasizing the importance of fruits and vegetables to improve overall wellness.

As noted by Fedorovich and Boyle (1992), because colleges and universities are facing budget cuts and reductions in financial funds, the benefits of wellness need to be validated. Little research has been conducted to support the need for wellness programs on campus settings. More research is needed on the development of wellness programs and services, the evaluations of the efficacy of those programs, assessments of students' needs, standards that display progress, and obstacles that campuses face to become healthy living and learning communities (Keeling, 2002). There needs to be a way to assess the effectiveness of wellness programs. Students' knowledge of wellness should increase and behavioral change should occur as a result from the programs. As proposed by Hettler (1984), promoting wellness in the college setting has the potential to increase retention, increases success after graduation, and result in longer life.

Wellness has become a university-wide issue. Every aspect of a university should be directed toward student development and the well-being of the student. When one dimension of a student's life is affected, a student's entire well-being is disrupted.

Conclusion

Wellness has developed because of progressive research. The definition and content of wellness has changed many times and greater implementation of this issue has also occurred. In previous research by Elliot et al. (1997), it has been verified that elements of problem-solving and health-related concerns form a relationship; however, it is not fully understood why social problem-solving predicts health outcomes. As a result, this limitation impairs an incorporation of problem-solving principles into wellness interventions for students (Elliot et al., 1997). Much research is still needed to develop the information on wellness. This study will increase data, which will further develop student wellness.

Summary of Chapter II

Chapter II contained a review of the literature related to wellness, in terms of definitions, theoretical perspectives, relevant studies, and related literature. Dunn, Ardell, and Hettler presented definitions of wellness. Described in detail were the health belief model, the wheel of wellness, and the wellness model. Also, relevant studies pertaining to wellness and how wellness is involved in the university setting. Chapter III will present information concerning the methodology of the study. It will cover the following subjects: the population, sample, instrumentation, and procedures.

CHAPTER III

METHODOLOGY

Chapter II reviewed the literature related to wellness. The literature review presented operational definitions, theoretical perspectives, and relevant studies. Presented in Chapter III will be information on the population, sample, research design, instrumentation, and procedure.

Methods

This study was a quantitative descriptive (survey) study. Data were collected from the TestWell Inventory to determine the current status of first year students' knowledge of wellness and the extent to which their lifestyle behaviors reflect potential risks and hazards. In descriptive research, subgroups can be compared, such as the way men and women view issues with respect to eight variables.

Population

The population for this descriptive study consisted of first year students enrolled at The University of Tennessee, Knoxville (UTK) for the Fall 2003 semester. A total of 382 first year students were purposively selected from 540 First Year Studies 100 students, which was a portion of the total population of 5,194 freshmen.

According to the Office of Institutional Research and Assessment at UTK, in Fall 2003 there were 3,579 first time freshmen, which consisted of 1,741 men and 1,838 women. There were also 1,615 "Other" freshmen, which consisted of transfer or re-applying freshmen. The male/female breakdown of "Other" freshmen was 888 men and 727 women. Therefore, the total population of first year students was 5,194. Of this total number of first year students, 4,461 were White, 468 were African American, 51 were

Hispanic, 127 were Asian, 21 were American Indian, 29 were International students, and 37 were non-respondents.

Sample Frame

Students attending class, on the day that the researcher surveyed, were the ones who were the sample of the population. The researcher attended 21 of 30 First Year Studies (FYS) classes.

Sampling and Procedure

A purposive sample was taken in the Fall 2003 first year studies courses at UTK. As described in Gay and Airasian (2003), a good sample is one that is representative of the population. Purposive sampling was chosen because the first year studies students seemed to be a good representation of the freshmen at UTK. FYS 100 is a freshmen seminar designed for students to make the most of their college careers. Through this course, students understand the importance of academic success and the strategies needed to achieve it. The courses emphasize essential academic survival skills including research techniques, written and oral communication, critical thinking, and computing skills.

The researcher selected students enrolled in FYS 100 to complete the TestWell Inventory in order to receive a representative sample of the population of first year students enrolled at UTK.

Instrumentation

There were a number of wellness inventory tests that could have been used to attain students' knowledge of wellness and holistic assessment. The Wellness Evaluation of Lifestyle was designed as an instrument for assessing and planning wellness lifestyles to people ages 18 and above. This test does evaluate 20 aspects of wellness, but consists

of 131 items and takes 20-30 minutes to conduct (*Mental Measurements Yearbooks*, 2002). The Stress Indicator and Health Planner, developed by Faulkner and Anderson, "assists people to identify their present health practices, pinpoint problem areas and plan for improved health, productivity, and well-being" (*Mental Measurements Yearbooks*). Some negative aspects of the test are the following: is geared toward adults, takes 30 minutes to conduct the survey, and is expensive at $12.00 per test booklet. The National Wellness Institute also designed the TestWell Health Risk Appraisal that targeted adults with a minimum of a 10th grade education. The test only takes 20 minutes to conduct and is $ .50 per test, but only focuses on five aspects of health.

The TestWell Wellness Inventory, the college version, was "designed to address lifestyle choices facing today's college students" (*Mental Measurements Yearbooks*, 2002). Prior to the TestWell Wellness Inventory was the Lifestyle Assessment Questionnaire (LAQ), which was developed by the National Wellness Institute Inc., at The University of Wisconsin, Stevens Point. The objectives of this survey were to give feedback to adults, with a minimum of a 10th grade education, about their wellness life-style, the effects on their health, and information and resources to build a higher level of wellness. Serving as the foundation for many university wellness programs, the LAQ consists of 11 subscales on the six dimensions of wellness. The National Wellness Institute (1980) reported 87% of students said they learned more about wellness from the LAQ, and 53% of them made behavioral changes after receiving feedback, thereby providing evidence of content validity for the LAQ.

The TestWell, the newer version of the Lifestyle Assessment Questionnaire, was also developed by the National Wellness Institute Inc. and was used for this study. The

TestWell Wellness Inventory contains 100 items and is scored on a five-point Likert scale. The 1-5 descriptors are *Almost Never*, *Seldom*, *Often*, *Very Often*, and *Almost Always*. Because the purpose of this study was to examine the knowledge of wellness and the extent to which students' lifestyle behaviors reflect potential risks and hazards, the TestWell was the best instrument for this study. TestWell Wellness Inventory – College Version was also chosen, because it was the most cost-effective, time-efficient, and appropriate test for the population.

TestWell was designed based on the six dimensions of wellness: physical, emotional, social, intellectual, occupational, and spiritual. The test addressed the following wellness issues: physical fitness, nutrition, social awareness, self-care and safety, emotional and sexuality, intellectual wellness, environmental wellness, emotional management, occupational wellness, and spirituality and values.

Established by the National Wellness Institute, the cost of the TestWell was $ .50 per inventory test. Because the costs summed to a considerable amount, the researcher's major professor for this study provided these instruments.

Even though there are little data on the validity and reliability of the TestWell Inventory, there have been many studies that have used this test. Jones and Frazier (1994) established that wellness and self-esteem were significantly correlated ($r = .59$; $p < .05$). They also computed a Cronbach coefficient alpha of .84.

This inventory was selected because of the 20 minute timing for the test and ease of administration, reliability, and validity. Until Jones and Frazier (1994), there were no data on the reliability and validity of this test.

Demographic Questionnaire

Developed by the researcher, the demographic questionnaire collected information on participants' demographics. The questionnaire collected information on (a) gender, (b) age, (c) marital status, (d) ethnicity, (e) GPA, (f) ACT scores, (g) the college in which the participant was enrolled at The University of Tennessee, (h) how often the participant used the UT Recreation Center, and (i) how many alcoholic drinks the participant consumed per week.

Participants were to write in their age. Marital status was the next item on the Demographic Questionnaire; participants were to mark whether they were (a) married, (b) widowed, (c) divorced, (d) separated, or (e) never married. Participants chose from the following race categories: (a) African American, (b) Asian/Pacific Islander, (c) Native American, (d) Hispanic, or (e) White. Next was grade point average (GPA), which was broken down into the following ranges: (a) 4.0, (b) 3.9-3.7, (c) 3.6-3.0, (d) 2.9-2.5, (e) 2.4-2.0, and (f) below a 1.9. ACT scores were also broken into ranges, (a) 13-15, (b) 16-19, (c) 20-23, (d) 24-27, (e) 28-32, and (f) 33-36. Next, participants chose from the following colleges at the University: (a) Agricultural Sciences and Natural Resources, (b) Architecture and Interior Design, (c) Arts and Sciences, (d) Business, (e) Communication and Information Sciences, (f) Education, Health, and Human Services, (g) Engineering, (h) Nursing, and (i) Social Work. The last two questions dealt with personal health. How often students used The University of Tennessee Recreation Center per week, (a) 0, (b) 1, (c) 2, (d) 3, and (e) more than 3? How many alcoholic drinks students consumed per week, (a) 0, (b) 1-2, (c) 2-3, (d) 3-4, (e) 4-5, and (f) more than 5?

Pilot Study

Even though it is suggested to conduct a pilot study, this study did not need one. A pilot study was not necessary for this study, because the instrument was used many times prior to this study.

Procedures

Data Collection

The researcher attended 21 out of 30 FYS 100 classes to fulfill the sample of 360. The student participants were given instructions that the survey is optional and anonymous, because the researcher did not know the identities of the participants (Gay & Airasian, 2003, p. 84). Students were given the demographic questionnaire and the TestWell Inventory. The entire process took 20 minutes to complete.

Data Analysis

After the data were collected, The University of Tennessee statisticians prepared and completed the data analysis. A *t*-test was conducted to determine whether the respondents' and non-respondents' responses were significantly different. A multiple analysis of variance (MANOVA) was used to determine whether there was a significant difference between subscales in the TestWell Inventory scores. Lastly, a simple analysis of variance (ANOVA) was used to determine whether there was a significant difference between means (Gay & Airasian, 2003, p. 467).

Summary of Chapter III

Chapter III contained a description of the methodology that was used when conducting the study. It contained information on the population, sample, research design, instrumentation, and procedures. This information has been provided to give the

reader an increased understanding of the in-depth processes and methods used in this study. Without this information, it may be challenging to conclude the quality and usefulness of this research study.

CHAPTER IV

FINDINGS

The purpose of this study was to examine The University of Tennessee's first year students' knowledge of wellness and the extent to which their lifestyle behaviors reflect potential risks and hazards. Also investigated were differences between students' TestWell Inventory scores and the following demographic characteristics: (a) gender, (b) age, (c) marital status, (d) ethnicity, (e) grade point average (GPA), (f) ACT scores, (g) the college in which the participant was enrolled at The University of Tennessee, (h) how often the participant used the UT Recreation Center, and (i) how many alcoholic drinks the participant consumed per week. Chapter III addressed information relative to the methods employed in this study. The results from the TestWell Inventories are presented in this chapter.

Response Rate

The researcher attended 21 of 30 first year studies classes held during the Fall 2003 semester, which summed to 382 completed surveys. When attending these classes, 3 of 382 students, chose not to complete the survey. Had the researcher surveyed every first year studies class, she would have acquired about 540 surveys. Therefore, the response rate was approximately 71%.

Demographic Results

The participants recorded their (a) gender, (b) age, (c) marital status, (d) ethnicity, (e) GPA, (f) ACT scores, (g) the college which they were enrolled at The University of Tennessee, (h) how often they used the UT Recreation Center, and (i) how many alcoholic drinks they consumed per week. Located in Table 1 are demographic data that

Table 1

Demographic Information of First Year Students (n=382)

Demographic variables	Frequency	Valid %	Cumulative %
Gender			
Male	179	47.1	47.1
Female	201	52.9	100.0
Missing Value	2		
Age			
17 years old	3.	0.8	0.8
18 years old	274	72.5	73.3
19 years old	92	24.3	97.6
20 years old	7	1.9	99.5
23 years old	2	0.5	100.0
Missing Value	7		
Marital status			
Married	1	0.3	0.3
Divorced	1	0.3	0.5
Never Married	373	99.5	100.0
Missing Value	7		
Ethnicity			
African-American	35	9.2	9.2
Asian/Pacific Islander	10	2.6	11.8
Native American	3	0.8	12.6
Hispanic	3	0.8	13.4
White	329	86.6	100.0
Missing Value	2		

Table 1 (continued)

Demographic variables	Frequency	Valid %	Cumulative %
Grade point average			
4.0	36	9.6	9.6
3.9-3.7	6	1.6	11.2
3.6-3.0	239	63.7	74.9
2.9-2.5	79	21.1	96.0
2.4-2.0	14	3.7	99.7
1.9 or below	1	0.3	100.0
Missing Value	7		
ACT score			
16-19	41	11.0	11.0
20-23	140	37.6	48.7
24-27	143	38.4	87.1
28-32	44	11.8	98.9
33-36	4	1.1	100.0
Missing Value	10		
College			
Agricultural Sciences and Natural Resources	8	2.1	2.1
Architecture and Interior Design	7	1.9	4.0
Arts and Sciences	263	69.6	73.5
Business	35	9.3	82.8
Communication and Information Sciences	15	4.0	86.8
Education, Health and Human Services	26	6.9	93.7
Engineering	18	4.8	98.4
Nursing	5	1.3	99.7
Social Work	1	0.3	100.0
Missing Value	4		

Table 1 (continued)

Demographic variables	Frequency	Valid %	Cumulative %
Weekly Usage of UT Recreation Center			
0 times	136	35.8	35.8
1 time	58	15.3	51.1
2 times	64	16.8	67.9
3 times	57	15.0	82.9
More than 3 times	65	17.1	100.0
Missing Value	2		
Alcoholic Drinks Per Week			
0 drinks per week	127	33.4	33.4
1-2 drinks per week	41	10.8	44.2
2-3 drinks per week	30	7.9	52.1
3-4 drinks per week	26	6.8	58.9
4-5 drinks per week	28	7.4	66.3
More than 5 drinks per week	128	33.7	100.0
Missing Value	2		

describe the participants in this study. The data are presented as frequencies and percentages. Of the 382 participants who responded to the demographic questionnaire, 179 (47.1%) were women. The other 201 (52.9%) participants were men. Two participants did not indicate their gender.

The analysis of participates' ages revealed that 3 (.8%) participants were 17 years of age; the majority of participants (n = 274, 72.5%) were 18 years of age; 92 (24.3%) participants were 19 years of age; 7 (1.9%) participants were 20 years of age; and 2 (.5%) participants were 23 years of age. No participant was 21 or 22 years of age. The majority, of participants (n = 366, 96.8%) were 18 or 19 years of age. Seven participants did not specify their age.

Regarding marital status, 1 (.3%) participant was married, 1 (.3%) participant was divorced, and 373 (99.5%) participants had never been married. Seven participants did not designate their marital status.

On the demographic question for ethnicity, 35 (9.2%) participants were African American; 10 (2.6%) participants were Asian/Pacific Islander; 3 (.8%) participants were Native American; 3 (.8%) participants were Hispanic; and 329 (86.6%) participants were White. Two participants did not reveal their ethnicity.

The demographic variable, Grade Point Average (GPA), was divided into six categories. Thirty-six (9.6%) participants recorded a 4.0 GPA; 6 (1.6%) recorded a GPA between 3.9 and 3.7; 239 (63.7%) participants reported a GPA between 3.6 and 3.0; 79 (21.1%) participants recorded a GPA between 2.9 and 2.5; 14 (3.7%) participants had a GPA between 2.4 and 2.0; and 1 participant had a GPA of 1.9 or below. As noted in Table 1, there were 7 missing values for the GPA item.

The sixth question on the demographic questionnaire related to ACT scores. There were 5 categories of ACT scores. Forty-one (11%) participants received a score of 16-19 on the ACT; 140 (37.6%) participants recorded an ACT score of 20-23; 143 (38.4%) participants reported a score of 24-27 on the ACT; 44 (11.8%) participants reported an ACT score of 28-32; and 4 (1.1%) participants recorded an ACT score of 33-36. Ten participants did not reply to this question.

Participants also indicated in which college they were enrolled. Eight (2.1%) participants were in the College of Agriculture Sciences and Natural Resources; 7 (1.9%) participants were in Architecture and Interior Design; 263 (69.6%) participants were enrolled in Arts and Sciences; 35 (9.3%) participants were in the College of Business; 15 (4.0%) participants were in Communication and Information Sciences; 26 (6.9%) participants were enrolled in Education, Health, and Human Sciences; 18 (4.8%) participants were in Engineering; 5 (1.3%) participants were in Nursing; and 1 (.3%) participant was in the College of Social Work. Four participants did not specify the college in which they were enrolled.

Participants were then asked how often they use The University of Tennessee's Recreation Center. As seen in Table 1, 136 (35.8%) participants reported that they did not use the recreation center; 58 (15.3%) participants used it once a week; 64 (16.8%) participants used the recreation center two times per week; 57 (15.0%) participants used the recreation center three times a week, and 65 (17.1%) participants used it more than three times per week. Two participants did not respond.

The last question on the demographic questionnaire inquired how many alcoholic drinks participants consumed per week. One-hundred-twenty-seven (33.4%) participants

replied that they did not drink alcohol; 41 (10.8%) participants reported drinking one to two alcoholic drinks per week; 30 (7.9%) participants reported drinking two to three alcoholic drinks per week; 26 (6.8%) participants consumed three to four alcoholic drinks per week; 28 (7.4%) participants drank four to five alcoholic drinks per week; and 128 (33.7%) participants consumed more than five alcoholic drinks per week. Two participants did not respond to this item.

Because of the distribution of frequencies, data were compressed into fewer categories than were on the demographic questionnaire for the following demographic categories: age, marital status, ethnicity, GPA, and ACT scores. This was done to prevent skewing data and to receive accurate statistics. Age was condensed to two categories: 18 or younger and 19 or older. Marital status was not considered, because 99.5% of participants, as indicated in Table 1, reported that they had never been married. Ethnicity was broken down into either African American or White, and GPA was condensed into four categories, 4.0-3.7, 3.6-3.0, 2.9-2.5, and 2.4 or below. Four categories of ACT scores were used: 13-19, 20-23, 24-27, and 28 or above.

TestWell Scores

Table 2 displays subscales of the TestWell Inventory and their ranges, means, variances, standard deviations, and alpha levels. The subscale, Physical Fitness and Nutrition, had the highest variance of the subscales (57.5402) and the highest standard deviation (7.5855). Medical Self-Care had the lowest alpha level of the subscales (.6597). Next, Environmental Wellness had the lowest mean score (25.6335). Subscales Social Awareness, Occupational Wellness, and Spirituality and Values had the highest range of 50. Sexuality and Emotional Awareness received four of the record scores-lowest in

Table 2

***Subscales of TestWell Inventory* (*n*=382)**

Subscale category	Range 10-50	*M*	Variance	*SD*	Alpha
Physical Fitness and Nutrition	40	30.5838	57.5402	7.5855	0.7335
Medical Self-Care	37	29.2354	50.4086	7.0999	0.6597
Safety	33	41.0340	36.3847	6.0320	0.7491
Environmental Wellness	36	25.6335	46.4113	6.8126	0.7371
Social Awareness	50	38.4184	43.6002	6.6030	0.8165
Sexuality and Emotional Awareness	26	44.0000	25.9314	5.0923	0.7361
Emotional Management	36	38.6937	33.4519	5.7838	0.7548
Intellectual Wellness	40	35.2225	56.2154	7.4977	0.8485
Occupational Wellness	50	37.6772	50.9990	7.1414	0.8645
Spirituality and Values	50	37.7008	50.6892	7.1196	0.8310
Average TestWell Scores		357			

range, 26; highest in mean, 44.0000; lowest in variance, 25.9314; and 5.0923, the lowest standard deviation among all other subscales. Last, Occupational Wellness obtained the highest alpha level of a .8645.

Null Hypothesis One

$H_0$1: There will be no significant difference between male participants' and female participants' Testwell scores as measured by the TestWell Inventory.

To establish if differences existed between men and women in their TestWell Inventory scores, an analysis of variance by gender was used to test every dependent variable. A multiple analysis of variance was applied to determine if there was a significant difference among three or more means at a selected probability level. This was the most appropriate test, because most of the demographic questions were broken into groups consisting of three or more groups. Another reason this test was used was to keep uniformity throughout the statistical analysis. Also, a univariate test was conducted for all subscales.

Table 3 displays mean scores for the TestWell Inventory based on gender. Overall, in each subscale, there was little difference between male participants' mean scores and female participants' mean scores. Compared to the other nine subscales, Sexuality and Emotional Awareness had the highest mean scores of 42.028 for the males and a 45.716 for the females, and the Environmental Wellness subscale had the lowest mean score 25.101 for the men and 26.109 for the women. The largest difference between male participants' and female participants' TestWell scores occurred in the Sexuality and Emotional Awareness subscale with a difference of a 3.688. The smallest difference between male participants' and female participants' TestWell mean scores

Table 3

***TestWell Inventory Mean Scores by Gender* (*n*=382)**

Dependent variables	*M*	*SE*	Lower bound	Upper bound
Physical				
Male	29.905	0.564	28.796	31.014
Female	31.209	0.532	30.162	32.256
Medical				
Male	29.464	0.531	28.420	30.507
Female	29.040	0.501	28.055	30.024
Safety				
Male	39.676	0.439	38.813	40.539
Female	42.333	0.414	41.519	43.148
Environment				
Male	25.101	0.510	24.098	26.103
Female	26.109	0.481	25.163	27.055
Social				
Male	37.162	0.508	36.164	38.160
Female	39.383	0.479	38.441	40.325
Sexuality				
Male	42.028	0.359	41.322	42.734
Female	45.716	0.339	45.050	46.383

Table 3 (continued)

Dependent variables	*M*	*SE*	Lower bound	Upper bound
Emotional				
Male	38.989	0.430	38.143	39.834
Female	38.438	0.406	37.640	39.236
Intellectual				
Male	34.670	0.558	33.573	35.768
Female	35.682	0.527	34.646	36.717
Occupational				
Male	35.944	0.597	34.769	37.119
Female	38.473	0.564	37.364	39.581
Spiritual				
Male	36.872	0.550	35.791	37.952
Female	38.194	0.519	37.174	39.214

Mean Range: 10-50

occurred in the Medical Self-Care subscale with a difference of .424.

In 8 of the 10 dependent variables in Table 3, women had higher mean scores than men. However, there was little difference between males' and females' mean scores. The largest difference was within a score of 3.688, and the smallest difference was a score of .424.

Table 4 displays results from a multiple analysis of variance of the total TestWell Inventory scores by gender. With 95% confidence, there was a significant difference in TestWell Inventory scores based on gender. Therefore, null hypothesis one was rejected.

Table 5 displays in more detail a univariate test of gender. Of the subscales, four dependent variables had a significant difference of .05 or less. Safety and Sexuality and Emotional Awareness had significant levels of .001, and Social Awareness and Occupational Wellness had levels of .002.

Null Hypothesis Two

$H_0 2$: There will be no significant difference between participants' age and their TestWell scores as measured by the TestWell Inventory.

To determine if there was a difference between TestWell Inventory scores based on age; an analysis of variance by age was used to test every dependent variable. A multiple analysis of variance was used to determine if there was a significant difference among three or more means at a selected probability level. Because most of the demographic questions were broken into groups consisting of three or more groups and to keep uniformity throughout the statistical analysis, this was the most appropriate test. Also, a univariate test was conducted for all subscales.

In the demographic questionnaire, the independent variable age was a fill-in

Table 4

Total TestWell Inventory Multiple Analysis of Variance by Gender

Source	Type III sum of squares	*df*	Mean square	*F*	Sig.
Corrected model	20646.835	1	20646.835	10.982	0.001*
Intercept	48320651.888	1	48320651.888	25702.742	0.001*
Gender	20646.835	1	20646.835	10.982	0.001*
Error	710632.597	378	1879.980		
Total	49330550.000	380			
Corrected total	731279.432	379			

*$p = <.05$

Table 5

***TestWell Inventory Subscale Univariate Tests of Gender* (*n*=382)**

Dependent variables	Sum of squares	Mean square	*F*	Sig.
Physical				
Contrast	160.980	160.980	2.826	0.094
Error	21532.609	56.965		
Medical				
Contrast	17.012	17.012	0.338	0.562
Error	19050.196	50.397		
Safety				
Contrast	668.598	668.598	19.399	0.001*
Error	13027.873	34.465		
Environmental				
Contrast	96.373	96.373	2.072	0.151
Error	17585.782	46.523		
Social				
Contrast	467.080	467.080	10.120	0.002*
Error	17445.804	46.153		
Sexuality				
Contrast	1288.135	1288.135	55.841	0.001*
Error	8719.696	23.068		

Table 5 (continued)

Dependent variables	Sum of squares	Mean square	*F*	Sig.
Emotional				
Contrast	28.747	28.747	0.868	0.352
Error	12515.450	33.110		
Intellectual				
Contrast	96.815	96.815	1.736	0.188
Error	21079.175	55.765		
Occupational				
Contrast	605.330	605.330	9.473	0.002*
Error	24155.541	63.904		
Spiritual				
Contrast	165.604	165.604	3.063	0.081
Error	20439.478	54.073		

df = 1(378), *p = <.05

question. Because 274 18-year old and 92 19-year old participants completed the survey, which is 96.8% of the participants, the researcher decided to run the test with two age categories: 18 year old or younger and 19 year old or older.

As shown in Table 6, the overall difference between ages in each dependent variable was not much. The Sexuality and Emotional Awareness subscale had the highest mean scores among ages. The Sexuality and Emotional Awareness TestWell Inventory mean score for 18 year olds or younger was 44.134 and 43.535 for 19 year olds. The lowest mean score was located in the Environmental Wellness subscale. Eighteen year olds or younger had a mean score of 25.498, and 19 year olds or older had a mean score of 26.059. The largest gap in scores occurred in the Emotional Management subscale; the 18 year old participants or younger had a mean score of 38.271, and the 19 year old participants or older had a mean score of 39.911, which was a difference of 1.64. The smallest gap of scores occurred in the Occupational Wellness subscale, with a difference of .061.

In 8 of the 10 dependent variables in Table 6, 19 year olds or older had a higher mean score. The largest difference between ages was within a score of 1.64, and the smallest difference between ages was a score of .061.

Table 7 displays results from a multiple analysis of variance of the total TestWell Inventory scores based on age. There was not a significant difference in total TestWell Inventory scores based on age at the .05 or less level of significant. Therefore, null hypothesis two was not rejected. Table 7 displays results from the Type III sum of squares, the degrees of freedom, the mean square, the *F* statistic, and level of significance.

Table 6

***TestWell Inventory Mean Scores by Age* (*n*=382)**

Dependent variables	*M*	*SE*	Lower bound	Upper bound
Physical				
18 or younger	30.368	0.455	29.473	31.264
19 or older	31.168	0.754	29.685	32.651
Medical				
18 or younger	28.877	0.426	28.039	29.716
19 or older	30.188	0.706	28.800	31.576
Safety				
18 or younger	41.144	0.361	40.434	41.855
19 or older	40.792	0.599	39.615	41.969
Environmental				
18 or younger	25.498	0.412	24.689	26.307
19 or older	26.059	0.681	24.719	27.399
Social				
18 or younger	38.123	0.414	37.309	38.936
19 or older	38.931	0.685	37.583	40.278
Sexuality				
18 or younger	44.134	0.309	43.526	44.741
19 or older	43.535	0.512	42.528	44.541

Table 6 (continued)

Dependent variables	*M*	*SE*	Lower bound	Upper bound
Emotional				
18 or younger	38.271	0.344	37.594	38.947
19 or older	39.911	0.570	38.790	41.031
Intellectual				
18 or younger	35.116	0.449	34.232	35.999
19 or older	35.594	0.744	34.131	37.058
Occupational				
18 or younger	37.256	0.488	36.298	38.215
19 or older	37.317	0.807	35.729	38.904
Spiritual				
18 or younger	37.513	0.444	36.639	38.386
19 or older	37.653	0.736	36.207	39.100

Mean Range: 10-50

Table 7

Total TestWell Inventory Multiple Analysis of Variance by Age

Source	Type III sum of squares	*df*	Mean square	*F*	Sig.
Corrected model	1740.169	1	1740.169	0.898	0.344
Intercept	38096965.778	1	38096965.778	19661.144	0.001*
Age	1740.169	1	1740.169	0.898	0.344
Error	728566.902	376	1937.678		
Total	49066813.000	378			
Corrected total	730307.071	377			

*p = <.05

The results from univariate test of age are displayed in Table 8. One dependent variable, Emotional Management, was significant at the .05 level.

Null Hypothesis Three

$H_0$3: There will be no significant difference between participants' marital status and their TestWell scores as measured by the TestWell Inventory. As demonstrated in Table 1, 99.5% of the participants had never married. Therefore, no statistical analyses were appropriate relative to participants' marital status.

Null Hypothesis Four

$H_0$4: There will be no significant difference between participants' ethnicity and their TestWell scores as measured by the TestWell Inventory.

An analysis of variance was conducted to verify if differences existed in TestWell Inventory scores by ethnicity. To keep uniformity throughout the statistical analysis, this was the most appropriate test. Also, a univariate test was conducted for all subscales.

In Table 9, the mean scores for the TestWell Inventory based on ethnicity are displayed. On the demographic questionnaire, the participants could have chosen African American, Asian/Pacific Islander, Native American, Hispanic, or White. However, after tabulating answers to the demographic questions, the two largest groups of ethnicities were White (86.6%) and African American (9.2%). So, Table 9 consists of ethnicity mean scores of the TestWell Inventory.

As shown in Table 9, African American participants scored higher than White participants on five dependent variables, while White participants scored higher than African American participants on the other five dependent variables. Sexuality and Emotional Awareness had the highest mean scores. African American participants had a

Table 8

***TestWell Inventory Subscale Univariate Tests of Age* (*n*=382)**

Dependent variables	Sum of squares	Mean square	*F*	Sig.
Physical				
Contrast	47.379	47.379	0.825	0.364
Error	21602.579	57.454		
Medical				
Contrast	127.181	127.181	2.526	0.113
Error	18929.252	50.344		
Safety				
Contrast	9.187	9.187	0.254	0.615
Error	13608.857	36.194		
Environmental				
Contrast	23.311	23.311	0.497	0.481
Error	17636.893	46.907		
Social				
Contrast	48.315	48.315	1.019	0.313
Error	17832.342	47.426		

Table 8 (continued)

Dependent variables	Sum of squares	Mean square	*F*	Sig.
Sexuality				
Contrast	26.549	26.549	1.004	0.317
Error	9947.186	26.455		
Emotional				
Contrast	199.098	199.098	6.071	0.014
Error	12330.891	32.795		
Intellectual				
Contrast	16.949	16.949	0.303	0.582
Error	21036.660	55.949		
Occupational				
Contrast	0.271	0.271	0.004	0.949
Error	24752.663	65.832		
Spiritual				
Contrast	1.468	1.468	0.027	0.870
Error	20548.077	54.649		

df = 1(376), *p = <.05

Table 9

***TestWell Inventory Mean Scores by Ethnicity* (*n*=382)**

Dependent variables	*M*	*SE*	Lower bound	Upper bound
Physical				
African American	30.686	1.276	28.176	33.195
White	30.565	0.416	29.747	31.384
Medical				
African American	30.914	1.209	28.537	33.291
White	29.109	0.394	28.334	29.885
Safety				
African American	41.229	1.017	39.229	43.229
White	41.024	0.332	40.372	41.677
Environmental				
African American	24.486	1.148	22.228	26.743
White	25.620	0.374	24.884	26.356
Social				
African American	37.057	1.168	34.761	39.354
White	38.523	0.381	37.774	39.272

Table 9 (continued)

Dependent variables	*M*	*SE*	Lower bound	Upper bound
Sexuality				
African American	44.000	0.846	42.336	45.664
White	44.167	0.276	43.624	44.710
Emotional				
African American	41.886	0.957	40.003	43.768
White	38.450	0.312	37.836	39.064
Intellectual				
African American	33.086	1.269	30.590	35.581
White	35.386	0.414	34.572	36.200
Occupational				
African American	36.600	1.382	33.882	39.318
White	37.432	0.451	36.545	38.318
Spiritual				
African American	39.057	1.258	36.584	41.530
White	37.447	0.410	36.640	38.254

Mean Range: 10-50

mean score of 44.000, and White participants had a mean score of 44.167. Environmental Wellness was the subscale with the lowest mean scores. African American participants' mean score was 24.486, and 25.620 was the mean score for White participants. The largest difference between African American and White participants' mean scores occurred on the Emotional Management subscale. African American participants' mean score was 41.886, and White participants' mean score was 38.450, a difference of 3.436. Physical Fitness and Nutrition was the subscale with the least difference between African American and White participants' mean scores. African American participants had a mean score of 30.686, and White participants had a mean score of 30.565, a difference of .121.

African American participants had a larger mean score than the White participants in the following subscales: Physical Fitness and Nutrition, Medical Self-Care, Safety, Emotional Management, and Spiritual and Values. White participants had larger mean scores than African American participants on the Environmental Wellness, Social Awareness, Sexuality and Emotional Awareness, Intellectual Wellness, and Occupational Wellness subscales.

Table 10 displays results from a multiple analysis of variance in total TestWell Inventory scores based on ethnicity. There was not a significant difference between ethnicity and total TestWell Inventory scores at a .05 level of significance. Therefore, null hypothesis four was not rejected. This table shows the Type III sum of squares, the degrees of freedom, the mean square, the *F* statistic, and level of significance.

Table 11 displays results from univariate tests of ethnicity for the TestWell

Table 10

Total TestWell Inventory Multiple Analysis of Variance by Ethnicity

Source	Type III sum of squares	*df*	Mean square	*F*	Sig.
Corrected model	51.555	1	51.555	0.026	0.871
Intercept	16250462.709	1	16250462.709	8334.635	0.001*
Ethnicity	51.555	1	51.555	0.026	0.871
Error	705809.830	362	1949.751		
Total	47317470.000	364			
Corrected total	705861.385	363			

*$p = <.05$

Table 11

***Total TestWell Inventory Subscale Univariate Tests of Ethnicity* (*n*=382)**

Dependent variables	Sum of squares	Mean square	*F*	Sig.
Physical				
Contrast	0.458	0.458	0.008	0.929
Error	20632.388	56.996		
Medical				
Contrast	103.051	103.051	2.015	0.157
Error	18508.804	51.129		
Safety				
Contrast	1.320	1.320	0.036	0.849
Error	13103.977	36.199		
Environmental				
Contrast	40.706	40.706	0.882	0.348
Error	16700.250	46.133		
Social				
Contrast	67.956	67.956	1.424	0.234
Error	17279.965	47.735		

Table 11 (continued)

Dependent variables	Sum of squares	Mean square	*F*	Sig.
Sexuality				
Contrast	0.884	0.884	0.035	0.851
Error	9071.805	25.060		
Emotional				
Contrast	373.452	373.452	11.645	0.001
Error	11608.965	32.069		
Intellectual				
Contrast	167.391	167.391	2.970	0.086
Error	20402.719	56.361		
Occupational				
Contrast	21.878	21.878	0.327	0.568
Error	24199.111	66.848		
Spiritual				
Contrast	82.034	82.034	1.482	0.224
Error	20041.205	55.362		

df = 1(362), *p = <.05

Inventory subscales. Of the subscales, only Emotional Management (.001) had a significant difference of .05 or less.

Null Hypothesis Five

$H_0$5: There will be no significant difference between participants' GPA and their TestWell scores as measured by the TestWell Inventory.

Table 12 displays mean scores for GPA. In the demographic questionnaire the question on GPA was based on a 4.0 scale and broken into six categories. Because only 15 students reported having a GPA below a 2.4 GPA, the statistician reduced the six GPA categories to four.

As shown in Table 12, participants with a GPA between 4.0 and 3.7 reported the highest mean scores compared to the other GPA categories. Overall, participants with a GPA between 3.6 and 3.0 reported the next highest mean scores; participants with a GPA between 2.9 and 2.5 had the third highest mean scores; and participants with a GPA below a 2.4 had the lowest mean scores. The exceptions to this sequential order were in the Emotional Management and Intellectual Wellness subscales.

The Sexuality and Emotional Awareness was the subscale with the highest mean scores among participants' GPA. Participants with a GPA between a 4.0 and 3.7 reported a mean score of 45.905; those with a GPA between a 3.6 and 3.0 had a mean score of 44.013; those with a GPA between a 2.9 and 2.5 had a mean score of 43.570, and those with a GPA of 2.4 or below had a 42.267 mean score. Environmental Wellness had the lowest mean scores. Participants with a GPA between 4.0 and 3.7 had a 27.476 mean score; those with a GPA between a 3.6 and 3.0 had a mean score of 25.360; those with a GPA between a 2.9 and 2.5 had a mean score of 25.139, and those with a GPA of 2.4 or

Table 12

TestWell Inventory Mean Scores by GPA (n=382)

Dependent variables	*M*	*SE*	Lower bound	Upper bound
Physical				
4.0-3.7	33.619	1.135	31.388	35.851
3.6-3.0	31.096	0.476	30.161	32.032
2.9-2.5	28.975	0.827	27.348	30.602
2.4 or Below	23.733	1.899	19.999	27.467
Medical				
4.0-3.7	31.167	1.095	29.014	33.319
3.6-3.0	29.310	0.459	28.407	30.212
2.9-2.5	28.532	0.798	26.962	30.101
2.4 or Below	26.200	1.831	22.599	29.801
Safety				
4.0-3.7	43.571	0.910	41.782	45.361
3.6-3.0	41.318	0.382	40.568	42.068
2.9-2.5	39.291	0.664	37.986	40.596
2.4 or Below	38.667	1.523	35.672	41.661
Environmental				
4.0-3.7	27.476	1.047	25.418	29.535
3.6-3.0	25.360	0.439	24.497	26.223
2.9-2.5	25.139	0.763	23.638	26.640
2.4 or Below	24.600	1.752	21.156	28.044

Table 12 (continued)

Dependent variables	M	SE	Lower bound	Upper bound
Social				
4.0-3.7	41.333	1.050	39.269	43.398
3.6-3.0	38.100	0.440	37.235	38.966
2.9-2.5	37.911	0.765	36.406	39.417
2.4 or Below	35.133	1.757	31.679	38.588
Sexuality				
4.0-3.7	45.905	0.770	44.390	47.419
3.6-3.0	44.013	0.323	43.378	44.647
2.9-2.5	43.570	0.562	42.465	44.674
2.4 or Below	42.267	1.289	39.732	44.801
Emotional				
4.0-3.7	39.333	0.885	37.594	41.073
3.6-3.0	38.715	0.371	37.986	39.445
2.9-2.5	38.734	0.645	37.466	40.003
2.4 or Below	36.600	1.480	33.689	39.511
Intellectual				
4.0-3.7	38.048	1.148	35.791	40.305
3.6-3.0	34.874	0.481	33.928	35.821
2.9-2.5	34.468	0.837	32.823	36.114
2.4 or Below	35.200	1.921	31.423	38.977

Table 12 (continued)

Dependent variables	M	SE	Lower bound	Upper bound
Occupational				
4.0-3.7	40.810	1.193	38.465	43.155
3.6-3.0	37.268	0.500	36.285	38.251
2.9-2.5	36.608	0.870	34.898	38.317
2.4 or Below	32.533	1.995	28.609	36.457
Spiritual				
4.0-3.7	41.571	1.115	39.379	43.763
3.6-3.0	37.577	0.467	36.659	38.496
2.9-2.5	36.089	0.813	34.490	37.687
2.4 or Below	33.333	1.865	29.665	37.001

Mean Range: 10-50

below had a 24.600 mean score. The largest difference between participants' GPA occurred in the Physical Fitness and Nutrition subscale. There was a 9.886 difference between participants with a GPA between a 4.0 and 3.7 and participants with a GPA of a 2.4 or below. The smallest difference between GPAs occurred in the Emotional Management subscale, with a difference of a 2.733.

As shown in Table 12, there were just two times that the sequential order of highest to lowest GPA did not occur, the Emotional Management subscale and the Intellectual Wellness subscale. Participants with a GPA between a 4.0 and 3.7 had the highest mean score. However, the participants with the next highest scores were not those with a GPA between a 3.6 and 3.0. Regarding Intellectual Wellness, participants with a GPA between a 2.9 and 2.5 had the lowest mean scores rather than participants with a GPA of a 2.4 or below.

Table 13 displays results from the multiple analysis of variance in total TestWell Inventory scores based on GPA. With 95% confidence, there was a significant difference between TestWell Inventory scores based on GPA. Therefore, null hypothesis five was rejected.

Table 14 displays the TestWell Inventory Subscale Univariate Tests of GPA. Of the dependent variables, six had a significant difference of a .05 level or less. Those subscales were Physical Fitness and Nutrition ($p \leq .001$), Safety ($p \leq .001$), Social Awareness ($p \leq .008$), Sexuality and Emotional Awareness ($p \leq .039$), Occupational Wellness ($p \leq .002$), and Spiritual and Values ($p \leq .001$).

Table 13

Total TestWell Inventory Multiple Analysis of Variance by GPA

Source	Type III sum of squares	*df*	Mean square	*F*	Sig.
Corrected model	45068.002	3	15022.667	8.257	0.001*
Intercept	18737314.647	1	18737314.647	10298.836	0.001*
Grade point average	45068.002	3	15022.667	8.257	0.001*
Error	674983.454	371	1819.362		
Total	48654903.000	375			
Corrected total	720051.456	374			

*$p = <.05$

Table 14

***TestWell Inventory Subscale Univariate Tests of GPA* (*n*=382)**

Dependent variables	Sum of squares	Mean square	*F*	Sig.
Physical				
Contrast	1357.103	452.368	8.363	0.001*
Error	20067.574	54.090		
Medical				
Contrast	335.285	111.762	2.221	0.085
Error	18666.992	50.315		
Safety				
Contrast	613.722	204.574	5.881	0.001*
Error	12905.755	34.786		
Environmental				
Contrast	191.001	63.667	1.383	0.247
Error	17074.599	46.023		
Social				
Contrast	558.308	186.103	4.020	0.008*
Error	17173.036	46.289		

Table 14 (continued)

Dependent variables	Sum of squares	Mean square	*F*	Sig.
Sexuality				
Contrast	210.708	70.236	2.819	0.039*
Error	9242.882	24.913		
Emotional				
Contrast	83.140	27.713	0.843	0.471
Error	12197.004	32.876		
Intellectual				
Contrast	407.507	135.836	2.455	0.063
Error	20528.210	55.332		
Occupational				
Contrast	895.757	298.586	4.999	0.002*
Error	22159.907	59.730		
Spiritual				
Contrast	1114.793	371.598	7.120	0.001*
Error	19362.317	52.190		

df = 3(371), *p = <.05

Null Hypothesis Six

$H_0$6: There will be no significant difference between participants' ACT score and their TestWell scores as measured by the TestWell Inventory.

Mean scores of the TestWell Inventory based on ACT scores are presented in Table 15. On the demographic questionnaire, the question pertaining to ACT scores was divided into six categories. However, after seeing the number of participants and their ACT scores, the statistician condensed the six categories to four, 13-19, 20-23, 24-27, and 28 or above.

Unlike the mean scores based on GPA, the mean scores based on ACT scores did not follow a sequential order from highest to lowest ACT scores. Only six of the subscales followed the highest to lowest sequential order. Participants with a 28 or above had the highest mean scores, and participants with an ACT score between 13 and 19 had the lowest scores, except in the Medical Self-Care subscale.

The subscale with the highest mean scores was Sexuality and Emotional Awareness. Participants with an ACT score between 13 and 19 had a 42.854 mean score; those with an ACT score between 20 and 23 had a 43.900 mean score; participants with an ACT score between 24 and 27 reported a mean score of 44.119, and those with an ACT score of 28 or above had a 44.417 mean score. The Environmental subscale had the lowest mean scores. Participants with an ACT score between 13 and 19 had a 24.341 mean score, those with an ACT score between 20 and 23 had a 25.929; those with an ACT score between 24 and 27 had a 25.315 mean score; and those with an ACT score of 28 or above had a 26.500 mean score.

Table 15

***TestWell Inventory Mean Scores by ACT Scores* (*n*=382)**

Dependent variables	*M*	*SE*	Lower bound	Upper bound
Physical				
13-19	29.220	1.188	26.884	31.555
20-23	30.307	0.643	29.043	31.571
24-27	30.713	0.636	29.463	31.964
28 or Above	31.875	1.098	29.716	34.034
Medical				
13-19	29.195	1.115	27.003	31.387
20-23	28.971	0.603	27.785	30.158
24-27	29.084	0.597	27.910	30.258
28 or Above	30.688	1.030	28.662	32.713
Safety				
13-19	40.390	0.945	38.532	42.248
20-23	40.964	0.511	39.959	41.970
24-27	41.007	0.506	40.012	42.002
28 or Above	41.938	0.873	40.220	43.655
Environmental				
13-19	24.341	1.069	22.240	26.443
20-23	25.929	0.578	24.791	27.066
24-27	25.315	0.572	24.189	26.440
28 or Above	26.500	0.988	24.558	28.442
Social				
13-19	37.756	1.079	35.635	39.877
20-23	38.293	0.584	37.145	39.441
24-27	37.881	0.578	36.745	39.017
28 or Above	40.083	0.997	38.123	42.044

Table 15 (continued)

Dependent variables	*M*	*SE*	Lower bound	Upper bound
Sexuality				
13-19	42.854	0.805	41.271	44.437
20-23	43.900	0.436	43.043	44.757
24-27	44.119	0.431	43.271	44.966
28 or Above	44.417	0.744	42.954	45.880
Emotional				
13-19	38.976	0.899	37.209	40.743
20-23	39.200	0.486	38.244	40.156
24-27	37.804	0.481	36.858	38.750
28 or Above	39.396	0.830	37.763	41.029
Intellectual				
13-19	31.951	1.139	29.712	34.191
20-23	34.571	0.616	33.359	35.783
24-27	35.497	0.610	34.297	36.696
28 or Above	39.083	1.053	37.013	41.153
Occupational				
13-19	35.000	1.261	32.520	37.480
20-23	37.464	0.683	36.122	38.807
24-27	37.483	0.675	36.154	38.811
28 or Above	38.375	1.166	36.082	40.668
Spiritual				
13-19	34.390	1.134	32.161	36.620
20-23	36.864	0.614	35.658	38.071
24-27	38.392	0.607	37.198	39.585
28 or Above	40.271	1.048	38.210	42.331

Mean Range: 10-50

The subscale with the largest difference between the four ACT score categories was Intellectual Wellness, with a difference of 7.132. Emotional Management was the subscale with the least difference between the four categories of ACT scores, with a difference of .420.

Table 16 displays results from the multiple analysis of variance in the TestWell Inventory scores based on ACT scores. There was a significant difference at the .05 level. Consequently, null hypothesis six was rejected.

The results from the univariate test of the TestWell Inventory subscales that are based on ACT scores are shown in Table 17. Of the subscales, two dependent variables had a significant difference of .05 or less. Those were Intellectual Wellness ($p \leq .001$) and Spiritual and Values ($p \leq .001$).

Null Hypothesis Seven

$H_0$7: There will be no significant difference between participants' college and their TestWell scores as measured by the TestWell Inventory.

Because a table containing mean scores for the nine colleges would be considerably large, one was not created. However, statistics were formulated. Sexuality and Emotional Awareness was the subscale with the highest mean scores. Environmental Wellness was the subscale with the lowest mean scores. The largest gap between colleges occurred in Social Awareness. Participants in the College of Nursing had a mean score of 32.000, and those in Social Work had a mean score of 46.000, which was a difference of 14.000. The smallest gap occurred in Intellectual Wellness. Participants in the College of Education, Health, and Human Service had a mean score of 33.385, and those in the

Table 16

Total TestWell Inventory Multiple Analysis of Variance by ACT Scores

Source	Type III sum of squares	*df*	Mean square	*F*	Sig.
Corrected model	18528.481	3	6176.160	3.222	0.023*
Intercept	34471430.092	1	34471430.092	17984.248	0.001*
ACT scores	18528.481	3	6176.160	3.222	0.023*
Error	705366.516	368	1916.757		
Total	48268535.000	372			
Corrected total	723894.997	371			

*$p = <.05$

Table 17

***TestWell Inventory Subscale Univariate Tests of ACT Scores* (*n*=382)**

Dependent variables	Sum of squares	Mean square	*F*	Sig.
Physical				
Contrast	168.911	56.304	0.973	0.405
Error	21287.312	57.846		
Medical				
Contrast	114.077	38.026	0.746	0.525
Error	18749.630	50.950		
Safety				
Contrast	56.929	18.976	0.518	0.670
Error	13470.383	36.604		
Environmental				
Contrast	130.548	43.516	0.929	0.427
Error	17235.344	46.835		
Social				
Contrast	189.865	63.288	1.327	0.265
Error	17557.200	47.710		

Table 17 (continued)

Dependent variables	Sum of squares	Mean square	*F*	Sig.
Sexuality				
Contrast	64.084	21.361	0.804	0.492
Error	9776.368	26.566		
Emotional				
Contrast	175.625	58.542	1.769	0.153
Error	12181.372	33.102		
Intellectual				
Contrast	1224.322	408.107	7.674	0.001*
Error	19571.603	53.184		
Occupational				
Contrast	280.792	93.597	1.435	0.232
Error	24007.778	65.239		
Spiritual				
Contrast	930.069	310.023	5.883	0.001*
Error	19391.727	52.695		

df = 3(368), *p = .<.05

College of Communication and Information Sciences had a mean score of 37.333, with a difference of 3.948.

As shown in Table 18, the significant difference was .884. Thus, null hypothesis seven was not rejected.

Table 19 displays the TestWell Inventory subscale univariate tests of colleges at The University of Tennessee. All of the subscales had a significant difference above .05.

Null Hypothesis Eight

$H_0$8: There will be no significant difference between how many times per week the participants utilize the UT Recreation Center and their TestWell scores as measured by the TestWell Inventory.

To determine if differences existed between dependent variable scores and how many times participants used The University of Tennessee recreation center, an analysis of variance by usage of the recreation center per week was used to test every dependent variable.

As seen in Table 20, participants who never used the recreation center were not always those with the lowest mean scores. The scores were not in sequential order, although in 6 of the 10 subscales, participants who visited the recreation center more than 3 times per week had the highest mean scores. The highest mean score occurred in Sexuality and Emotional Awareness, and Environmental Wellness had the lowest mean score.

The mean scores were relatively close to one another. The smallest difference occurred in the Intellectual Wellness subscale, with a difference of 1.923. The largest difference, 10.399, occurred in Physical Fitness and Nutrition.

Table 18

Total TestWell Inventory Multiple Analysis of Variance by Colleges at The University of Tennessee

Source	Type III sum of squares	*df*	Mean Square	*F*	Sig.
Corrected model	7191.038	8	898.880	0.460	0.884
Intercept	6387750.348	1	6387750.348	3270.061	0.001*
Colleges	7191.038	8	898.880	0.460	0.884
Error	720806.087	369	1953.404		
Total	49105993.000	378			
Corrected total	727997.124	377			

*$p = <.05$

Table 19

***TestWell Inventory Subscale Univariate Tests of Colleges at The University of Tennessee* (*n*=382)**

Dependent variables	Sum of squares	Mean square	*F*	Sig.
Physical				
Contrast	319.229	39.904	0.695	0.696
Error	21186.562	57.416		
Medical				
Contrast	421.458	52.682	1.043	0.403
Error	18636.587	50.506		
Safety				
Contrast	265.617	33.202	0.920	0.500
Error	13319.262	36.096		
Environmental				
Contrast	197.359	24.670	0.525	0.838
Error	17335.618	46.980		
Social				
Contrast	606.825	75.853	1.627	0.116
Error	17207.175	46.632		

Table 19 (continued)

Dependent variables	Sum of squares	Mean square	*F*	Sig.
Sexuality				
Contrast	402.794	50.349	1.937	0.054
Error	9591.992	25.995		
Emotional				
Contrast	137.839	17.230	0.523	0.839
Error	12164.174	32.965		
Intellectual				
Contrast	276.979	34.622	0.623	0.759
Error	20516.407	55.600		
Occupational				
Contrast	311.020	38.877	0.589	0.787
Error	24336.599	65.953		
Spiritual				
Contrast	463.235	57.904	1.063	0.388
Error	20100.099	54.472		

df = 8(369), *p = <.05

Table 20

***TestWell Inventory Mean Scores by Recreation Center Usage* (*n*=382)**

Dependent variables	*M*	*SE*	Lower bound	Upper bound
Physical				
0 times	27.581	0.558	26.484	28.677
1 time	27.155	0.854	25.476	28.834
2 times	29.859	0.813	28.261	31.458
3 times	34.175	0.861	32.482	35.869
More than 3 times	37.554	0.807	35.968	39.140
Medical				
0 times	28.471	0.601	27.289	29.652
1 time	27.966	0.920	26.156	29.775
2 times	29.391	0.876	27.668	31.113
3 times	29.105	0.928	27.280	30.930
More than 3 times	31.954	0.869	30.245	33.663
Safety				
0 times	40.235	0.514	39.224	41.247
1 time	42.241	0.788	40.692	43.790
2 times	41.031	0.750	39.557	42.506
3 times	41.439	0.795	39.876	43.001
More than 3 times	41.554	0.744	40.091	43.017
Environmental				
0 times	25.603	0.586	24.451	26.755
1 time	24.586	0.897	22.822	26.351
2 times	26.063	0.854	24.383	27.742
3 times	26.807	0.905	25.027	28.587
More than 3 times	25.185	0.848	23.518	26.851

Table 20 (continued)

Dependent variables	*M*	*SE*	Lower bound	Upper bound
Social				
0 times	37.875	0.585	36.725	39.025
1 time	36.586	0.895	34.826	38.346
2 times	38.141	0.852	36.465	39.816
3 times	39.386	0.903	37.610	41.162
More than 3 times	40.138	0.846	38.476	41.801
Sexuality				
0 times	43.500	0.437	42.642	44.358
1 time	42.845	0.668	41.530	44.159
2 times	43.766	0.636	42.514	45.017
3 times	44.860	0.674	43.534	46.185
More than 3 times	45.431	0.631	44.189	46.672
Emotional				
0 times	38.199	0.490	37.235	39.162
1 time	37.638	0.751	36.162	39.114
2 times	38.359	0.714	36.955	39.764
3 times	39.930	0.757	38.441	41.418
More than 3 times	39.938	0.709	38.544	41.332
Intellectual				
0 times	35.647	0.642	34.385	36.909
1 time	33.724	0.983	31.791	35.657
2 times	35.203	0.936	33.363	37.043
3 times	35.439	0.992	33.489	37.388
More than 3 times	35.400	0.929	33.574	37.226

Table 20 (continued)

Dependent variables	*M*	*SE*	Lower bound	Upper bound
Occupational				
0 times	36.816	0.691	35.457	38.175
1 time	36.121	1.058	34.040	38.201
2 times	36.594	1.007	34.613	38.574
3 times	38.263	1.067	36.164	40.362
More than 3 times	39.108	1.000	37.142	41.073
Spiritual				
0 times	37.088	0.629	35.851	38.325
1 time	36.448	0.963	34.554	38.342
2 times	36.734	0.917	34.931	38.537
3 times	39.088	0.972	37.177	40.998
More than 3 times	39.077	0.910	37.288	40.866

Mean Range: 10-50

Table 21 displays results from a multiple analysis of variance of total TestWell Inventory score by usage of the recreation center. There was a significant difference at the .05 level. Therefore, null hypothesis eight was rejected.

Table 22 shows a univariate test of usage of the recreation center. Four of the subscales had a significant difference of .05 or less. Physical Fitness and Nutrition had a .001 level; Medical Self-Care had a level of .011; Social Awareness had a .036 level, and Sexuality and Emotional Awareness had a level of .026.

Null Hypothesis Nine

$H_0$9: There will be no significant difference between how many alcoholic drinks per week participants consume and their TestWell scores as measured by the TestWell Inventory.

Table 23 presents descriptive statistics relative to the number of alcoholic drinks participants consumed per week. In 7 of the 10 subscales, participants who consumed five or more alcoholic drinks per week had the lowest mean scores. In only 4 of the 10 subscales, participants who did not consume alcoholic drinks had the highest mean scores. Sexuality and Emotional Awareness had the highest mean scores, and the lowest mean scores occurred in the Environmental Wellness subscale.

The greatest difference in mean scores based on the number of alcoholic drinks consumed per week occurred in the Safety subscale. However, four questions in the Safety subscale and one question in the Emotional Management subscale pertained to drinking alcohol. Participants who consumed five or more drinks per week had a mean score of 37.664, and those who did not consume alcohol had a mean score of 43.929. This was a difference of 6.265. The smallest difference between mean scores based on

Table 21

Total TestWell Inventory Multiple Analysis of Variance by Recreation Center Usage

Source	Type III sum of squares	*df*	Mean square	*F*	Sig.
Corrected model	42258.513	4	10564.628	5.750	0.001*
Intercept	4406246.397	1	44062646.397	23981.119	0.001*
Usage of recreation center	42258.513	4	10564.628	5.750	0.001*
Error	689020.918	375	1837.389		
Total	49330550.000	380			
Corrected total	731279.432	379			

*$p = <.05$

Table 22

***TestWell Inventory Subscale Univariate Tests of Recreation Center Usage* (*n*=382)**

Dependent variables	Sum of squares	Mean square	*F*	Sig.
Physical				
Contrast	5834.834	1458.709	34.493	0.001*
Error	15858.755	42.290		
Medical				
Contrast	655.930	163.983	3.340	0.011*
Error	18411.278	49.097		
Safety				
Contrast	197.346	49.336	1.371	0.244
Error	13499.125	35.998		
Environmental				
Contrast	167.116	41.779	0.894	0.467
Error	17515.040	46.707		
Social				
Contrast	482.943	120.736	2.598	0.036*
Error	17429.941	46.480		

Table 22 (continued)

Dependent variables	Sum of squares	Mean square	*F*	Sig.
Sexuality				
Contrast	289.928	72.482	2.797	0.026*
Error	9717.903	25.914		
Emotional				
Contrast	292.954	73.238	2.242	0.064
Error	12251.244	32.670		
Intellectual				
Contrast	159.350	39.837	0.711	0.585
Error	21016.639	56.044		
Occupational				
Contrast	409.575	102.394	1.577	0.180
Error	24351.296	64.937		
Spiritual				
Contrast	428.134	107.034	1.989	0.096
Error	20176.947	53.805		

df = 4(375), *p = <.05

Table 23

***TestWell Inventory Mean Scores by Weekly Alcoholic Consumption* (*n*=382)**

Dependent variables	*M*	*SE*	Lower bound	Upper bound
Physical				
0 drinks	30.992	0.669	29.677	32.307
1-2 drinks	30.537	1.177	28.222	32.851
2-3 drinks	32.000	1.376	29.295	34.705
3-4 drinks	31.769	1.478	28.863	34.675
4-5 drinks	32.500	1.424	29.700	35.300
5 or more drinks	29.234	0.666	27.925	30.544
Medical				
0 drinks	30.110	0.626	28.879	31.342
1-2 drinks	28.537	1.102	26.369	30.704
2-3 drinks	30.500	1.288	27.966	33.034
3-4 drinks	29.077	1.384	26.355	31.798
4-5 drinks	30.857	1.334	28.235	33.480
5 or more drinks	27.984	0.624	26.758	29.211
Safety				
0 drinks	43.929	0.481	42.984	44.874
1-2 drinks	41.220	0.846	39.556	42.883
2-3 drinks	42.733	0.989	40.789	44.678
3-4 drinks	42.923	1.062	40.834	45.012
4-5 drinks	40.107	1.024	38.094	42.120
5 or more drinks	37.664	0.479	36.723	38.606

Table 23 (continued)

Dependent variables	*M*	*SE*	Lower bound	Upper bound
Environmental				
0 drinks	26.283	0.605	25.093	27.474
1-2 drinks	26.171	1.065	24.076	28.265
2-3 drinks	25.967	1.245	23.518	28.415
3-4 drinks	27.077	1.338	24.447	29.707
4-5 drinks	25.214	1.289	22.680	27.749
5 or more drinks	24.539	0.603	23.354	25.725
Social				
0 drinks	39.087	0.607	37.893	40.280
1-2 drinks	38.122	1.068	36.022	40.222
2-3 drinks	39.967	1.249	37.512	42.422
3-4 drinks	37.231	1.341	34.594	39.868
4-5 drinks	39.857	1.292	37.316	42.398
5 or more drinks	37.172	0.604	35.983	38.360
Sexuality				
0 drinks	44.197	0.453	43.306	45.088
1-2 drinks	45.659	0.797	44.091	47.226
2-3 drinks	44.800	0.932	42.967	46.633
3-4 drinks	43.808	1.001	41.839	45.777
4-5 drinks	44.143	0.965	42.246	46.040
5 or more drinks	43.031	0.451	42.144	43.919

Table 23 (continued)

Dependent variables	*M*	*SE*	Lower bound	Upper bound
Emotional				
0 drinks	39.976	0.505	38.983	40.969
1-2 drinks	37.878	0.889	36.130	39.626
2-3 drinks	39.433	1.039	37.390	41.476
3-4 drinks	37.115	1.116	34.921	39.310
4-5 drinks	39.036	1.076	36.921	41.151
5 or more drinks	37.766	0.503	36.777	38.755
Intellectual				
0 drinks	35.654	0.662	34.351	36.956
1-2 drinks	34.732	1.166	32.440	37.024
2-3 drinks	37.667	1.363	34.987	40.346
3-4 drinks	33.577	1.464	30.699	36.455
4-5 drinks	35.679	1.410	32.905	38.452
5 or more drinks	34.563	0.660	33.265	35.860
Occupational				
0 drinks	38.976	0.708	37.585	40.368
1-2 drinks	38.463	1.245	36.014	40.912
2-3 drinks	37.867	1.456	35.004	40.730
3-4 drinks	36.962	1.564	33.886	40.037
4-5 drinks	34.179	1.507	31.215	37.142
5 or more drinks	35.828	0.705	34.442	37.214

Table 23 (continued)

Dependent variables	*M*	*SE*	Lower bound	Upper bound
Spiritual				
0 drinks	39.835	0.635	38.586	41.084
1-2 drinks	37.488	1.118	35.290	39.686
2-3 drinks	39.433	1.307	36.864	42.003
3-4 drinks	36.000	1.404	33.240	38.760
4-5 drinks	36.857	1.353	34.197	39.517
5 or more drinks	35.391	0.633	34.147	36.635

Mean Range: 10-50

the number of alcoholic drinks consumed per week occurred in the Sexuality and Emotional Awareness subscale. Participants who consumed five or more alcoholic drinks per week had a mean score of 43.031, and those who consumed one or two alcoholic drinks per week had a mean score of 45.659. This was a difference of 2.628.

Table 24 presents results from a multiple analysis of variance of total TestWell Inventory scores by alcoholic drinks per week. There was a significant difference at .001. Thus, null hypothesis nine was rejected.

In more detail, Table 25 displays a univariate test of alcoholic drinks per week and the TestWell Inventory subscales. Of the 10 subscales, 4 had a significant difference of .05 or less. Safety had a .001 level; Emotional Management had a level of .022; Occupational Wellness had a .010 level, and Spiritual and Values had a level of .001.

Summary of Findings

Chapter IV consists of the results of first year studies students' TestWell Inventories. Participants completed a survey regarding demographics, their consumption of alcohol, and usage of The University of Tennessee recreation center and completed the 100-question college version of the TestWell Inventory.

The population for this study consisted of first year studies students in the Fall 2003 classes. The response rate was approximately 71%. Two-hundred-one (52.9%) participants were men. There were 274 (72.5%) participants who were 18 years of age. Almost all of the participants, 373 (99.5%), had never been married. Of the participants, 329 (86.6%) were White. Pertaining to grade point average, 239 (63.7%) participants had a GPA between 3.6 and 3.0. One-hundred-forty (37.6%) participants reported an ACT score between 20 and 23, and 143 (38.4%) participants reported an ACT score between

Table 24

Total TestWell Inventory Multiple Analysis of Variance by Alcoholic Drinks Per Week

Source	Type III sum of squares	*df*	Mean square	*F*	Sig.
Corrected model	48343.685	5	9668.737	5.295	0.001*
Intercept	31476803.125	1	31476803.125	17237.821	0.001*
Alcoholic drinks	48343.685	5	9668.737	5.295	0.001*
Error	682935.746	374	1826.031		
Total	49330550.000	380			
Corrected total	731279.432	379			

*$p = <.05$

Table 25

***TestWell Inventory Subscale Univariate Tests of Alcoholic Drinks Per Week* (*n*=382)**

Dependent variables	Sum of squares	Mean square	*F*	Sig.
Physical				
Contrast	453.818	90.764	1.598	0.160
Error	21239.771	56.791		
Medical				
Contrast	439.813	87.963	1.766	0.119
Error	18627.395	49.806		
Safety				
Contrast	2722.138	544.428	18.554	0.001*
Error	10974.333	29.343		
Environmental				
Contrast	281.223	56.245	1.209	0.304
Error	17400.932	46.527		
Social				
Contrast	423.217	84.643	1.810	0.110
Error	17489.667	46.764		

Table 25 (continued)

Dependent variables	Sum of squares	Mean square	*F*	Sig.
Sexuality				
Contrast	258.391	51.678	1.982	0.080
Error	9749.440	26.068		
Emotional				
Contrast	430.924	86.185	2.661	0.022*
Error	12113.273	32.388		
Intellectual				
Contrast	344.565	68.913	1.237	0.291
Error	20831.425	55.699		
Occupational				
Contrast	974.993	194.999	3.066	0.010*
Error	23785.878	63.599		
Spiritual				
Contrast	1442.046	288.409	5.629	0.001*
Error	19163.035	51.238		

df = 5(374), *p = <.05

24 and 27. There were 263 (69.6%) participants enrolled in Arts and Sciences. One-hundred-thirty-six (35.8%) participants did not use the recreation center at The University of Tennessee, and 65 (17.1%) participants used it more than three times per week. One-hundred-twenty-seven (33.4%) participants replied that they did not drink alcohol, and 128 (33.7%) participants consumed more than 5 alcoholic drinks per week.

Nine null hypotheses were tested using analyses and multiple analyses of variance at the $p \leq .05$ level of significance. The analysis of variance using the total TestWell Inventory indicated no significant differences in TestWell Inventory scores based on age, ethnicity, and the college in which participants were enrolled. At the .05 confidence level, there were significant differences in TestWell Inventory scores based on gender, GPA, ACT scores, weekly usage of the recreation center, and consumption of alcoholic drinks.

CHAPTER V

SUMMARY, CONCLUSIONS, RECOMMENDATIONS, AND IMPLICATIONS

Chapter VI showed the results from the statistical analysis for the nine null hypotheses. Data were illustrated as they related to demographic information, and 10 subscales of the TestWell Inventory—college version. This chapter summarizes this study and discusses conclusions, implications for practitioners, and recommendations for future research on wellness.

Summary

Even though there are no longitudinal studies, based on findings from current studies, it is apparent that students' health and wellness are declining. The highest mean score (44.000) occurred in the Sexuality and Emotional Awareness subscale, and the lowest mean score (25.6335) occurred in the Environmental Wellness subscale. These were considerably low scores, as the highest score participants could receive was 50.

The key purpose of this descriptive study was to examine The University of Tennessee (UTK) first year students' knowledge of wellness and the extent to which their lifestyle behaviors reflect potential risks and hazards. Also, to conduct a thorough study, it was important to determine participants' demographic characteristics. The questionnaire collected information on (a) gender, (b) age, (c) marital status, (d) ethnicity, (e) GPA, (f) ACT scores, (g) the college in which the participant was enrolled in at The University of Tennessee, (h) how often the participant used the UT Recreation Center, and (i) how many alcoholic drinks the participant consumed per week.

The population of this study consisted of first year students enrolled at UTK for

the Fall 2003 semester. A total of 382 first year students were purposively selected from a total freshmen class population of 5,194. There were approximately 540 students enrolled in the First Year Studies (FYS) 100 courses in Fall 2003. The researcher attended 21 of 30 FYS 100 classes. Most participants were White and not married. The overall response rate was approximately 71%. On the day the researcher surveyed, those who attended class were the ones who composed the sample of the population.

The instrument used in this study was the TestWell Wellness Inventory, the college version. This test, which was developed by the National Wellness Institute Inc., was "designed to address lifestyle choices facing today's college students" (*Mental Measurements Yearbooks*, 2002). Even though there are little data on the validity and reliability of the TestWell Inventory, other studies have used this test. The goal of the inventory is to help students understand themselves so they can make changes or better choices to improve their wellness. Until Jones and Frazier (1994) established that wellness and self-esteem were significantly correlated ($r = .59; p < .05$), there were no data on the reliability and validity of the TestWell Inventory. They also computed a Cronbach coefficient alpha of .84.

The first test that was run for this study consisted of frequencies and percentages. Then, three graphs were shown per demographic question. The first of these graphs displayed the mean scores of demographic characteristics and the dependent variables. Next, an analysis of variance in total TestWell scores by demographic characteristic. This test's content concentrated on the entire inventory rather than its subscales. The last test was a univariate test for each of the demographic characteristics and the 10 TestWell Inventory subscales was run.

Dunn (1961) stated that complete well-being encompasses wellness of the body, mind, and environment. The TestWell Inventory subscales' scores ranged on a scale of 10 to 50. Sexuality and Emotional Awareness had the highest mean score of 44.0000, and Environmental Wellness had the lowest mean score of 25.6335.

Five of the null hypotheses were rejected. Those five hypotheses related to gender, GPA, ACT scores, usage of The University of Tennessee's recreation center, and consumption of alcohol.

Regarding gender, there were 179 men and 201 women who participated in the survey. There was little difference in the mean scores for men and women. The largest difference between genders occurred in the Sexuality and Emotional Awareness subscale. The smallest difference occurred in Medical Self-Care. Looking at the separate subscales, four had significant differences of .05 or less. There was a significant difference in total TestWell Inventory scores based on gender at a .05 level.

Most participants (96.8%) were 18 or 19 years of age. Similar to gender, there was not much difference in mean scores between ages. Emotional Wellness had the largest difference in mean scores, and Occupational Wellness had the smallest difference between ages. Regarding age, Emotional Wellness was the only subscale that had a significant difference less than .05. Because there was a significant difference of .344 in the total TestWell Inventory, there was not a significant difference in age.

Regarding marital status, 99.5% of participants were never married. Therefore, no tests were conducted.

Most participants (86.6%) were White. Compared to age and ethnicity, there was more variance between African American participants' and White participants' mean

scores. Both, the White and African American, participants scored highest in five of the subscales. The largest difference in mean scores (3.436) occurred in the Emotional Wellness subscale. Physical Fitness and Nutrition had the smallest difference between mean scores (.121). A single subscale (Emotional Wellness) had a significant difference of .001. When analyzing the total TestWell Inventory, there was not a significant difference, so the researcher did not reject the fourth null hypothesis, regarding participants' ethnicity.

The fifth demographic question concerned participants' GPA. Three-hundred-eighteen participants had a GPA between 3.6 and 2.5. Overall, the higher the participants' with higher GPAs, the higher the mean scores were. The largest difference between GPA and mean scores occurred in the Physical Fitness and Nutrition subscale. Emotional Wellness was the subscale with the smallest difference. The subscale univariate test of GPA demonstrated .05 or less significant difference in six subscales: Physical Fitness and Nutrition, Safety, Social Awareness, Sexuality and Emotional Awareness, Occupational Wellness, and Spiritual and Values. Also, viewing the total TestWell Inventory multiple analysis of variance by GPA, there was a significant difference of .001. As a result, null hypothesis five, regarding GPA, was rejected.

Of the surveyed first year studies students, 76% had an ACT score between 20 and 27. Comparable to GPA, those students who scored highest on the ACT had the highest mean scores. However, in three of the subscales, this sequential order was not the case. Of the subscales, two dependent variables — Intellectual Wellness and Spiritual and Values — had a significant difference of .05 or less. The total TestWell Inventory's

analysis of variance proved a significant difference of .023, so null hypothesis six, regarding ACT scores, was rejected.

Most participants were enrolled in The College of Arts and Sciences. The largest gap between mean scores and colleges occurred in Social Awareness. The smallest gap occurred in Intellectual Wellness, although there were no significant differences at the .05 level. In addition, the total TestWell Inventory multiple analysis of variance by colleges did not have a significant difference at the .05 level. Consequently, the seventh null hypothesis, regarding the college in which participants were enrolled, was not rejected.

Approximately 35% of surveyed first year studies students never used The University of Tennessee's recreation center. There were only 65 participants (17.1%) who used the center more than three times per week. As expected, the largest difference of mean scores occurred in the Physical Fitness and Nutrition subscales. The smallest difference of mean scores occurred in Intellectual Wellness. The univariate test of usage of the recreation center showed 4 of the 10 subscales (Physical Fitness and Nutrition, Medical Self-Care, Social Awareness, and Sexuality and Emotional Awareness) had a significant difference less than .05. There was a significant difference at a level of .001 in the total TestWell Inventory analysis of variance by usage of the recreation center. Thus, null hypothesis eight, regarding participants' weekly usage of The University of Tennessee's recreation center, was rejected.

The percentage of participants who never consumed alcoholic beverages was approximately 33%, the same percentage of participants who reported drinking more than five drinks per week. Mean scores in the Safety subscale had the largest difference, and mean scores in Sexuality and Emotional Awareness subscale had the smallest difference.

Safety, Emotional Wellness, Occupational Wellness, and Spiritual and Values had a significant difference less than a .05 level. A level of .001 was the significant difference in the total TestWell Inventory multiple analysis of variance by consumption of alcoholic drinks per week. The researcher rejected the last null hypothesis.

Major Findings

As noted earlier, the purpose of this study was to analyze The University of Tennessee first year students' knowledge of wellness and the extent to which their lifestyle behaviors reflect potential risks and hazards. Based on the results of the demographic questionnaire, approximately 73% of participants were 18 years of age; 99.5% had never been married, and 87% were White. There were approximately 64% who reported a GPA between 3.6 and 3.0. Approximately 76% scored between 27 and 20 on the ACT. The largest number of participants (70%) was enrolled in The College of Arts and Sciences. A large number (36%) of surveyed first year studies students never used the recreation center. The percentage of participants who never drink alcohol was 33%, and the percentage who drinks more than five drinks per week is 33%. The following major findings were discovered:

1. Out of the highest score of 50, the Sexuality and Emotional Awareness subscale had the highest mean score ($x = 44.0000$). Environmental Wellness was the subscale with the lowest mean score ($x = 25.6335$).

2. The Sexuality and Emotional Awareness subscale had the lowest variance (26.000), and the Physical Fitness and Nutrition subscale had the highest amount of variance (57.5).

3. Marital status was not a demographic characteristic that had an effect on TestWell Inventory scores because 99.5% of surveyed first year studies students reported never being married.

4. Based on the multiple analysis of variance of the total TestWell Inventory by demographic characteristics, the following null hypotheses were not rejected: age, ethnicity, and the college in which participants were enrolled. However, significant differences were discovered in null hypotheses regarding gender, GPA, ACT scores, usage of the university's recreation center, and consumption of alcohol per week.

5. Contrary to past studies, African Americans scored higher in Emotional Wellness than Whites.

6. Gender had an effect on TestWell Inventory mean scores. In 8 of the 10 dependent variables, women had higher mean scores than men.

7. Grade point average (GPA) had an effect on TestWell Inventory mean scores. The higher the participants' GPAs, the higher their TestWell scores were.

8. Similar to GPA, participants' reported ACT scores had an effect on TestWell Inventory mean scores. On average, the higher the participants' ACT scores, the higher their TestWell scores were.

9. Both GPA and ACT scores had effects on TestWell Inventory mean scores. However, based on GPA, there was a significant level of .05 in six dependent variables; based on ACT scores, there was a significant level of .05 in two dependent variables.

10. Usage of The University of Tennessee's recreation center had an effect on individuals' TestWell Inventory scores. Participants who visited the recreation center more than 3 times per week had the highest mean scores in the Physical Fitness and Nutrition, Medical Self-Care, Social Awareness, Sexuality and Emotional Awareness, Emotional Wellness, and Occupational Wellness subscales.

11. Consumption of alcohol had an effect on reported TestWell Inventory scores. Participants who drank five or more drinks per week had the lowest mean scores in the following subscales: Physical Fitness and Nutrition, Medical Self-Care, Environmental Wellness, Social Awareness, Sexuality and Emotional Awareness, and Spiritual and Values.

12. There was no significant difference between participants' ages, ethnicities, and the colleges in which participants were enrolled and their TestWell scores measured by the TestWell Inventory.

Conclusions

This study was designed to further determine what effects wellness behaviors and risks have on students. Also, this study explored differences between TestWell Inventory scores and (a) gender, (b) age, (c) marital status, (d) ethnicity, (e) GPA, (f) ACT scores, (g) the college in which the participant was enrolled at The University of Tennessee, (h) how often the participant used the UT Recreation Center per week, and (i) how many alcoholic drinks the participant consumed per week.

Not knowing the true reliability and validity of this instrument, the limitations and delimitations presented in Chapter I place some restrictions on the validity of the conclusions. However, the findings in this study support and contribute to the knowledge of wellness literature. The following conclusions were formed:

1. Participants in this study were mostly White and had never been married.

2. Fifty was the highest score that could be attained in each subscale. Sexuality and Emotional Awareness had the highest mean score of 44.0000. Environmental Wellness had the lowest mean score of 25.6335.

3. As stated in the review of literature, the Higher Education Research Institute (2002) reported that college students' physical and emotional health have hit a record low. Nahas (1992) also stated a decline in physical health. This research study supports this statistic. The Physical Fitness and Nutrition subscale had the eighth lowest mean score among other subscales.

4. Although there was little difference in mean scores based on gender from this study, there was a significant difference of .001 between gender and TestWell Inventory scores.

5. There was no significant difference in TestWell Inventory scores based on age.

6. There was no significant difference in TestWell Inventory scores based on ethnicity.

7. There was a significant difference in TestWell Inventory scores based on GPA.

8. There was a significant difference in TestWell Inventory scores based on ACT scores.

9. There was no significant difference in TestWell Inventory scores based on colleges in which participants were enrolled.

10. There was a significant difference in TestWell Inventory scores based on participants' usage of The University of Tennessee's recreation center per week.

11. There was a significant difference in TestWell Inventory scores based on participants' consumption of alcohol per week.

Recommendations

Different instruments, samples, experience than those used in this study could add to the depth of knowledge of college students' wellness behaviors. The following section includes recommendations for future wellness studies.

1. This study concentrated on students who were enrolled in the First Year Studies 100 course. First year studies students are not an adequate representation of all college students. For a future study, it would be useful to visit other classrooms at many different age levels at The University of Tennessee.

2. This study included only students attending The University of Tennessee, Knoxville, a public university. It would be interesting to see if there are changes in wellness behaviors between public and private first year studies students.

3. Almost 100% of the participants in this study had never been married. It would be interesting to see if marriage, divorce, separation, and widowed would play a factor in individuals' wellness behavior.

4. Participants' average age in this study was 18 years old. Because the participants were freshmen and young, this could play a part in the reported wellness risks and behaviors. In the future it would be fascinating to see if those who are older report different TestWell Inventory scores.

5. Most participants (86.6%) were White. Again, in a future study, a more diverse sample would give a better representation if there were significant differences between ethnicity and TestWell Inventory scores.

6. Most participants in this study were enrolled in the College of Arts and Sciences. It would be beneficial to include students who were from a more diverse group of studies.

7. Add a survey on attitudes or motivational levels. Albert Bandura (1977) was a key contributor to the social learning theory and believed motivation is a key aspect that has an effect on individual's perceived abilities on his/her behavior. A future correlational study between TestWell Inventory scores and attitudes could contribute to the knowledge of wellness among college students.

8. The Centers for Disease Control and Prevention (CDC) developed the 1995 National College Health Risk Behavior Survey. It reported that 31.3% of students smoked cigarettes daily; 29% were current smokers; 16.5% were currently frequent cigarette smokers. On a future demographic questionnaire, a question about participants' smoking habits would be beneficial.

9. A comprehensive understanding of factors that influence wellness behaviors could be attained if a longitudinal study was conducted. This could illustrate if and how wellness behaviors progress or decline throughout their college career.

10. Future research studies should include a larger, nationally representation of college students to broaden generalizability.

Implications

Implications surface after examining past literature on wellness, findings of this study, conclusions, and recommendations. These implications are simply suggestions for professionals and administrators to expand and develop their wellness programs. Use and understanding of these are based on the readers' interpretations.

1. Due to The University of Tennessee's demographic breakdown, this study involved primarily Whites. Of the 21 First Year Studies classes that the researcher attended, there were only 35 African Americans, 10 Asian/Pacifics, 3 Native Americans, and 3 Hispanics in the Fall 2003 freshmen class. The University needs to recruit a more diverse group of first year students. There were only 468 African American, 51 Hispanic, 127 Asian, and 21 American

Indian freshmen students. If the freshmen class was more diverse, researchers could have a more diverse and comprehensive study.

2. Results of demographic characteristics and TestWell Inventory scores of first year studies students indicated low levels of wellness and include high levels of drinking. Approximately 33% of participants did not drink alcohol, which means 67% did consume alcohol. Also, these participants were 18 or 19 years of age. Hence, a majority of first year students illegally consumed alcohol. The University of Tennessee administrators should actively incorporate wellness programs into students' everyday lifestyles and the University's curriculum. College student personnel professionals should take action in

3. facilitating and encouraging students to take full responsibility for their own wellness. According to Fain and Lewis (2002), administrators and staff must first understand the holistic approach to wellness before they can incorporate it into activities and programming.

4. Because this study reported that approximately 36% of participants do not use The University of Tennessee's recreation center, the staff should improve programs and inform students of the benefits of using the center.

5. The University of Tennessee recently added a state-of-the-art recreation center to its campus, but there should be more of an emphasis on total wellness, not just physical fitness. The University should complement this center with an active, comprehensive wellness center. This department could teach components and develop programs using William H. Hettler's (1980) wellness framework, which incorporates six dimensions of wellness: intellectual, emotional, physical, social, occupational, and spiritual.

If professionals take these recommendations into consideration, they could influence the wellness knowledge and behaviors of college students. By using the above recommendations, administrators could help students achieve greater academic success and help them have a more positive college experience.

Summary of Chapter V

Chapter V summarized this study, displayed major findings, presented conclusions, and suggested implications for future studies on wellness behaviors of college students. A major finding that coincides with literature is that overall wellness

knowledge and behaviors of college students is not where it could be. The suggestions and implications displayed in this chapter hopefully will contribute to the knowledge of college students' wellness risks and behaviors.

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APPENDICES

APPENDIX A

DEMOGRAPHIC QUESTIONNAIRE

Wellness Among Freshmen at The University of Tennessee

DEMOGRAPHIC QUESTIONNAIRE

Instructions: Please answer the following questions.

1. Gender: ___ Male ___ Female

2. What is your age: _____

3. Marital Status: ___ Married ___ Widowed ___ Divorced ___ Separated
___ Never Married

4. What is your Ethnicity:

___ African American ___ Asian/Pacific Islander ___ Native American
___ Hispanic ___ White

5. What is your G. P. A.?

___ 4.0 ___ 3.9-3.7 ___ 3.6-3.0 ___ 2.9-2.5 ___ 2.4-2.0 ___ below 1.9

6. What did you score on your ACT?

___ 13-15 ___ 16-19 ___ 20-23 ___ 24-27 ___ 28-32 ___ 33-36

7. What College are you in at The University of Tennessee:

___ Agricultural Sciences & Natural Resources
___ Architecture & Interior Design ___ Education, Health, & Human Services
___ Arts & Sciences ___ Engineering
___ Business ___ Nursing
___ Communication & Information Sciences ___ Social Work

8. How often do you use the UT Recreation facility per week?

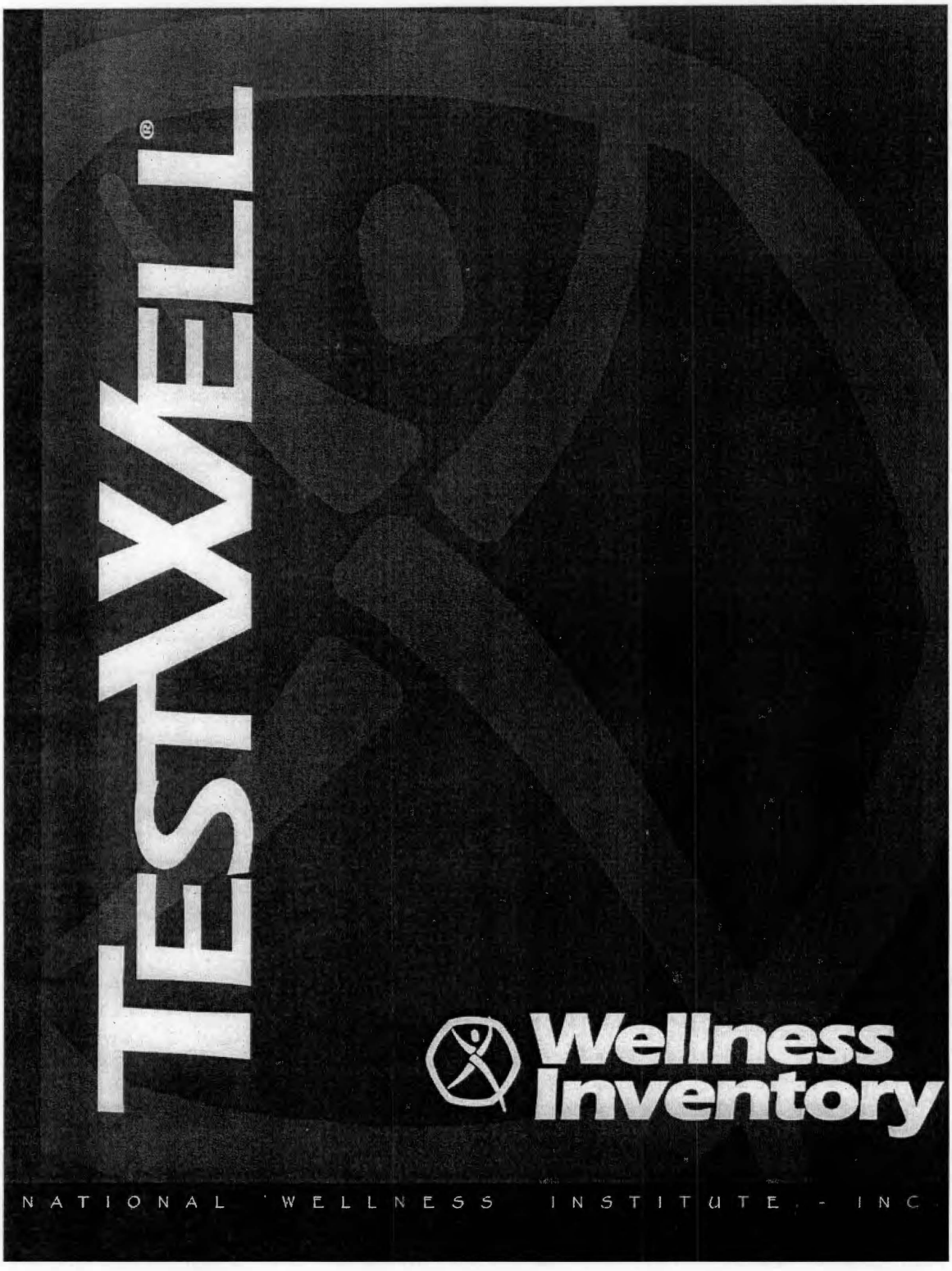
___ 0 ___ 1 ___ 2 ___ 3 ___ more than 3 times

9. On average, how many alcohol drinks do you consume per week?

___ 0 ___ 1-2 ___ 3-4 ___ 4-5 ___ more than 5

APPENDIX B

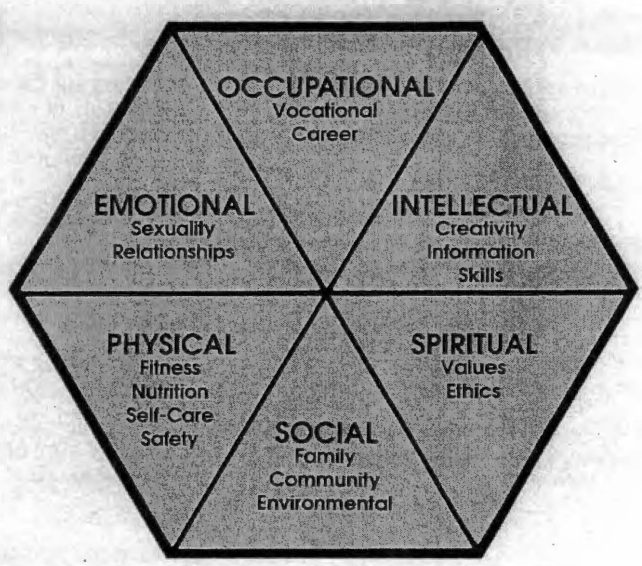
TESTWELL INVENTORY


TESTWELL®
Wellness Inventory
NATIONAL WELLNESS INSTITUTE - INC

WHAT IS TESTWELL™?

TestWell™ is a self-scoring wellness assessment based on the six dimensions of wellness described below. It provides you with information about wellness and helps you to identify your current success in achieving a high level of well-being. By completing TestWell™ you will become more aware of possible ways to improve your wellness lifestyle.

SIX DIMENSIONS OF WELLNESS*



WELLNESS is a continuous, active process—not a single goal or achievement. It is a process of becoming aware of the different areas in your life, identifying the areas that need improvement, and then making choices that will help you attain a higher level of health and well-being.

This six-dimensional model emphasizes the importance of creating a balance in the many different areas which make up your life. Each of these affects each other and determines your overall wellness status.

* Six Dimensions of Wellness Copyright 1979, Bill Hettler, M.D.

INSTRUCTIONS:

Please **write the number** that identifies **your response** in the box to the left of each question.

Please respond to the statements using the following responses:
5....**Almost always** (90% or more of the time)
4....**Very often** (approximately 75% of the time)
3....**Often** (approximately 50% of the time)
2....**Occasionally** (approximately 25% of the time)
1....**Almost never** (less than 10% of the time)

At the end of each section, **add your response numbers** and place the **sum** in the appropriate Section Total box.

To calculate your **TestWell™** score follow the instructions at the **end** of the questionnaire.

✦ PHYSICAL FITNESS AND NUTRITION

1. I exercise aerobically (continuous, vigorous, sweat-producing exercise for 20-30 minutes) at least three times per week.
2. Stretching is a routine part of my exercise program.
3. I increase my physical activity by walking or biking for transportation whenever possible.
4. My exercise program includes an adequate amount of each of the three major fitness components—endurance (aerobic), strength (weight training), and flexibility (stretching).
5. If I am not in shape, I avoid sporadic (once per week or less), strenuous exercise. (If you are in shape, answer "5".)
6. I avoid eating foods that are high in fat (fatty cuts of meat, whole milk dairy products, fried foods, hot dogs, processed foods, rich desserts, and creamy sauces).
7. I eat at fast food restaurants less than once per week.
8. I intentionally include foods high in fiber in my diet on a daily basis (i.e. whole grain breads and cereals, beans, etc.)
9. I maintain my weight within the recommendations for my height and gender.
10. I eat at least four servings (one serving equals ½ cup) of fruits and/or vegetables every day.

SECTION TOTAL (add responses of 1-10)

✦ MEDICAL SELF-CARE

11. I maintain an up-to-date immunization record.
12. I examine my breasts or testes on a monthly basis.
13. I take action to minimize my exposure to tobacco smoke.
14. I consider alternatives to taking medications when ill.
15. I drink enough water (6-8 glasses per day) to keep my urine light yellow.
16. I floss my teeth once per day.
17. I engage in an adequate amount of physical activity to keep my resting heart rate at 60 beats or less per minute.
18. I protect my skin from sun damage by using sunscreen or by taking other precautions to prevent overexposure to the sun.
19. I maintain my blood pressure within the range recommended by my doctor. (If you do not have your blood pressure checked, answer "1".)
20. I maintain my blood cholesterol level within the range recommended by my doctor. (If you have never had your cholesterol checked, answer "1".)

SECTION TOTAL (add responses of 11-20)

Please respond to the statements using the following responses:
5....**Almost always** (90% or more of the time)
4....**Very often** (approximately 75% of the time)
3....**Often** (approximately 50% of the time)
2....**Occasionally** (approximately 25% of the time)
1....**Almost never** (less than 10% of the time)

✦ SAFETY

21. I refrain from operating vehicles while I am under the influence of alcohol or other drugs.
22. I refrain from riding with vehicle operators who are under the influence of alcohol or other drugs.
23. I stay within five miles per hour of the speed limit.
24. I wear my seat belt and/or shoulder harness while traveling.
25. The vehicles I drive are maintained to assure safety.
26. I enjoy myself without the use of drugs or alcohol.
27. I use approved child restraints for all children riding in my vehicle. (If children do not ride in your vehicle, answer "5".)
28. I refrain from using drugs obtained from unlicensed sources.
29. I use the recommended safety equipment for any activity in which I participate.
30. When I travel on a motorcycle, bicycle, or all-terrain vehicle, I wear a helmet.

SECTION TOTAL (add responses of 21-30)

✦ ENVIRONMENTAL WELLNESS

31. To conserve energy I turn off lights and electrical appliances when I am not using them.
32. I avoid purchasing food that is packaged in styrofoam.
33. I operate fuel efficient motor vehicles. (If you do not operate a motor vehicle answer "5".)
34. I keep the thermostat in my home set at 68° F or lower in the winter.
35. When I go shopping, I take my own reusable bag to carry my purchases rather than accept plastic or paper bags.
36. I refrain from letting the water faucet run while I am brushing my teeth, shaving, or washing my car.
37. I regularly recycle my paper, plastic, glass, and aluminum.
38. I am involved in learning more about how I can protect the environment.
39. I encourage others to support efforts to protect the environment.
40. I purchase products made with recycled materials whenever possible.

SECTION TOTAL (add responses of 31-40)

✦ SOCIAL AWARENESS

41. My behavior reflects fairness and justice.
42. I contribute to the feeling of acceptance with my family, friends, and coworkers.
43. I resolve conflict in a positive and respectful manner.
44. I use my creativity in constructive ways.
45. I exercise my right to vote.
46. I take time to play with and enjoy my family and friends.
47. I help others in need.
48. When I notice a safety hazard I take action to correct the situation.
49. I contribute time and/or money to at least one organization that strives to better the community where I live.
50. I participate in community events.

SECTION TOTAL (add responses of 41-50)

Please respond to the statements using the following responses:
5 ... **Almost always** (90% or more of the time)
4 ... **Very often** (approximately 75% of the time)
3 ... **Often** (approximately 50% of the time)
2 ... **Occasionally** (approximately 25% of the time)
1 ... **Almost never** (less than 10% of the time)

✦ SEXUALITY AND EMOTIONAL AWARENESS

51. I am comfortable with my level of sexual involvement.
52. I feel positive about myself as a sexual person.
53. My sexual relationships and behaviors are maintained in a manner that is healthy for me and for others.
54. I am able to develop close, intimate, personal relationships.
55. My sexual needs are satisfied without conflicting with other needs in my life.
56. I am tolerant of others who have different sexual orientations.
57. I am able to love others without expecting them to "earn" my love.
58. I have positive relationships with men in my life.
59. I have positive relationships with women in my life.
60. When engaging in sexual behavior, I take steps to minimize the risk of spreading or contracting sexually transmitted diseases. (If you do not engage in sexual behavior, answer "5".)

SECTION TOTAL (add responses of 51-60)

✦ EMOTIONAL MANAGEMENT

61. I express my feelings of anger in ways that are not hurtful to others.
62. I can say "no" without feeling guilty.
63. I make decisions with a minimum of stress and worry.
64. I do not feel unreasonably hurried in my daily routine.
65. I include relaxation time as part of my daily routine.
66. When I make mistakes, I try to learn from them.
67. I set realistic objectives for myself.
68. I can relax my body and mind without the use of drugs or alcohol.
69. I accept responsibility for my actions.
70. I accept responsibility for creating my own feelings.

SECTION TOTAL (add responses of 61-70)

✦ INTELLECTUAL WELLNESS

71. I keep informed about social and political issues.
72. I am interested in learning about scientific discoveries.
73. I make an effort to maintain and improve my writing and verbal skills.
74. I seek opportunities to learn new things.
75. I participate in activities such as visiting museums, exhibits, and zoos, or attending plays and concerts at least three times a year.
76. I watch educational programs on television.
77. I maintain a continuing education program relative to my occupation or activities.
78. I read about different topics from a variety of newspapers, magazines, or books.
79. I gather information from several sources before making important decisions.
80. I am interested in understanding the views of others.

SECTION TOTAL (add responses of 71-80)

Please respond to the statements using the following responses:
5....**Almost always** (90% or more of the time)
4....**Very often** (approximately 75% of the time)
3....**Often** (approximately 50% of the time)
2....**Occasionally** (approximately 25% of the time)
1....**Almost never** (less than 10% of the time)

✦ OCCUPATIONAL WELLNESS

81. I enjoy my work.
82. I take advantage of opportunities to learn new skills in my work.
83. There is an acceptable amount of challenge in my work.
84. I perform my work in a satisfactory manner.
85. I look forward to doing my job.
86. I am satisfied with the balance between my work time and leisure time.
87. I am satisfied with my ability to manage and control my workload.
88. My work is consistent with my values.
89. The level of stress in my work environment is comfortable to me.
90. At work my level of authority is consistent with my level of responsibility.

SECTION TOTAL (add responses of 81-90)

✦ SPIRITUALITY AND VALUES

91. I feel that my life has a positive purpose.
92. I spend a portion of every day in prayer, meditation, and/or personal reflection.
93. My values guide my daily life.
94. I am mainly guided by my "inner self" rather than the expectations of others.
95. I am concerned about humanitarian issues.
96. My spiritual awareness occurs at times other than during crises.
97. My leisure time activities are consistent with my values.
98. I am tolerant of the values and beliefs of others.
99. I am able to discuss my own death with family and friends.
100. I am satisfied with my spiritual life.

SECTION TOTAL (add responses of 91-100)

TestWell™ Scoring Worksheet

Transfer each Section Total from the questionnaire to the Scoring Worksheet below.
Add all of the Section Totals to obtain your TestWell™ Total Score.

Section Totals

Physical Fitness/Nutrition		Emotional Management	
Medical Self-Care		Intellectual Wellness	
Safety		Occupational Wellness	
Environmental Wellness		Spirituality and Values	
Social Awareness			
Sexuality/Emotional Awareness		TestWell™ TOTAL SCORE	
		Total of all 10 Section Totals	

✦ Interpreting Your TestWell™ Total Score

If your TestWell™ Total Score is ...

Between 425-500

Congratulations! You appear to have reached a high level of wellness. Be proud of the positive aspects of your lifestyle habits. Strive to maintain and improve your current healthy lifestyle behaviors.

With your high level of wellness, you may be interested in the following books:

The Wellness Book
Herbert Benson, M.D. and
Eileen M. Stuart, R.N., M.S.

Wellness Workbook, Second Edition
John W. Travis, M.D. and
Regina Sara Ryan

Between 350-424

You have many positive aspects in your overall lifestyle. Maintain the positive aspects of your lifestyle while striving to enhance those areas that need improvement.

Two books that may be of interest to you are:

Seeking Your Healthy Balance
Donald Tubesing, M.Div., Ph.D.

Lifegain
Robert F. Allen, Ph.D.

349 or less

The lifestyle choices you are making today may be adversely impacting your current health status and future quality of life. It would be to your advantage and to those who love you to improve your level of wellness. Perhaps you should begin with your weakest area and set a realistic goal for improvement. Good luck in reaching a healthier tomorrow.

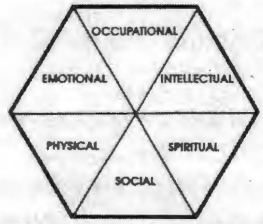
You may be interested in these two books:

Lifegain
Robert F. Allen, Ph.D.

Wellness: Small Changes You Can Use to Make a Big Difference
John W. Travis, M.D. and
Regina Sara Ryan

If you would like assistance in locating any of these books, please contact the National Wellness Institute at (715) 342-2969.

THE SIX DIMENSIONS OF WELLNESS



Take a moment to reflect on each of the **Six Dimensions of Wellness**. Each area affects every other, and together they represent your total wellness status. Aim for wellness in each dimension; the choices and changes you make today will influence those you make tomorrow!

Physical

Do you get enough exercise? Eat a balanced diet? Do you practice safe driving and medical self-care? Do you avoid the use of tobacco, drugs, and excessive alcohol consumption? If you take good care of your body, it will repay you with years of good service.

Social

How satisfying are your relationships with your spouse, your family, your friends, and associates? Are you active in community affairs? Do you contribute to protecting the environment by conserving and recycling? Social wellness is based on your ability to interact harmoniously with people and the Earth.

Emotional

Are you able to recognize and accept your feelings, your strengths, and your limitations? Can you manage your emotions and cope with stressful events? Achieving emotional wellness allows you to experience life's ups and downs with enthusiasm and grace and maintain satisfying relationships with others.

Intellectual

Do you feel creatively and mentally challenged? Are you continually seeking to expand your knowledge and skills? An intellectually well person uses available resources to expand knowledge, improve skills, and to increase the potential for sharing with others.

Spiritual

Do you have an appreciation for the meaning of life and the expanse of nature? Are you at peace with your place in the universe? Do you have a set of beliefs and values that give purpose to your life? Spiritual wellness involves developing a strong sense of personal values and ethics.

Occupational

Do you find your work satisfying? Do you have a balance between your work and leisure time? Do you enjoy new responsibilities and look forward to achieving better results? Your attitudes about your work can greatly affect your job performance and interactions with coworkers. Striving toward occupational wellness will help to give you personal satisfaction and allow you to find enrichment in your life through work.

National Wellness Institute, Inc., P.O. Box 827, Stevens Point, WI 54481-0827; (715) 342-2969

VITA

Laura Bilderback was born in Wooster, Ohio on December 14, 1979. She attended Dalton High School in Ohio and graduated in 1998. Following high school, Laura attended The University of Toledo, where she was very involved with campus activities, such as Golden Key, Mortar Board, Leadership UT, Blue Key, and the organization that struck her interest in wellness – Student Wellness Awareness Team (SWAT). She graduated in May, 2002 with her Bachelor of Business Administration with a major in Human Resources - Business Management.

Immediately receiving her undergraduate degree, she began a Master of Science during the Fall semester of 2002 at The University of Tennessee, Knoxville. She graduated May, 2004.